McCARTNEY LIBRARY
GENEVA COLLEGE

FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WE

DECEMBER 15, 1952

A-11
GENEVA COLLEGE
MC CARTNEY LIBRARY

A fleet of General Motors Diesel locomotives is turning in an impressive performance record on the Delaware, Lackawanna and Western Railroad—averaging 950,000 ton-miles per month and hauling 15% more gross ton-miles per train-hour than the steam locomotives they replaced.

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS

La Grange, Illinois • Home of the Diesel Locomotive
In Canada: GENERAL MOTORS DIESEL, LTD., LONDON, ONTARIO

GENERAL MOTORS
LOCOMOTIVES

Famous

Texaco Railroad Lubricants and Systematic Engineering Service

Texaco Systematic Engineering Service is famous with railroads in every corner of the country. The men who render it know railroading. They don't hesitate to get into "coveralls" and work with their hands as well as their heads. Their job is to help you reduce costs and keep equipment available. They do it with a know-how that goes far beyond lubricant recommendations.

Working "hand in glove" with this field service, is Texaco Research. Petroleum scientists in Texaco laboratories are constantly seeking the answers to the practical problems of actual railroad operation. Their contributions to effective railroad lubrication have been many and notable.

Texaco, for example, was first to develop an all-year car and engine oil—*Texaco Texayce Oil.* Introduced nearly 25 years ago, and constantly improved since, *Texaco Texayce Oil* gives full summer and winter protection for car and engine journals and all oil-lubricated reciprocating parts. It more than meets A.A.R. specifications and is used by leading railroads.

Let a Texaco representative help *your* road increase equipment efficiency and reduce costs. Just call the nearest Railway Sales office in New York, Chicago, San Francisco, St. Paul, St. Louis or Atlanta; or write The Texas Company, *Railway Sales Department,* 135 East 42nd Street, New York 17, N. Y.

TEXACO Railroad Lubricants

AND SYSTEMATIC ENGINEERING SERVICE

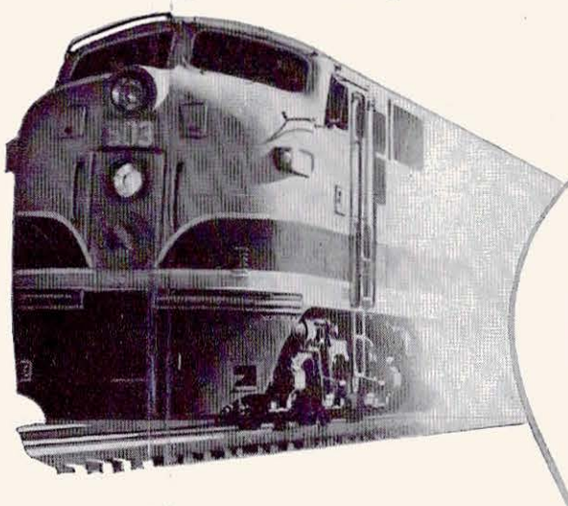
Faithfully yours

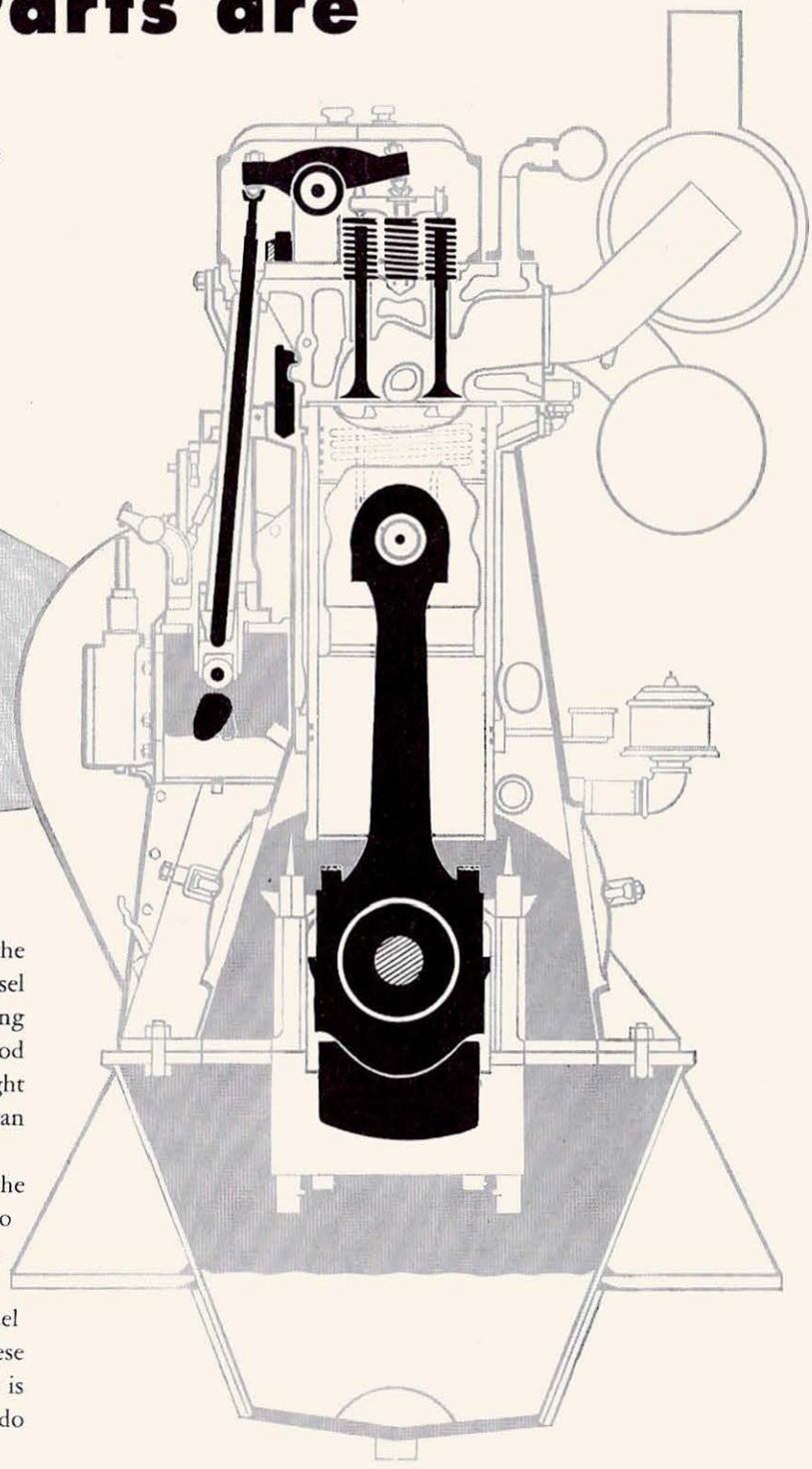
50

for Fifty Years

The Vital Parts are

Alloy Steel





Consider the sustained stresses set up in the connecting rod or rocker-arm shaft of a diesel engine. These parts must withstand high working stresses, yet their size must be controlled. Good design demands high strength together with light section—a combination that alloy steels can provide.

In other parts, too, alloy steels supply the resistance to corrosion, heat, and wear that is so essential to long, trouble-free engine operation.

Bethlehem produces the alloy steels used for parts by many of the nation's leading diesel builders. The uniformity and quality of these steels are rigidly controlled. Every precaution is taken to see that they have the properties to do the job.

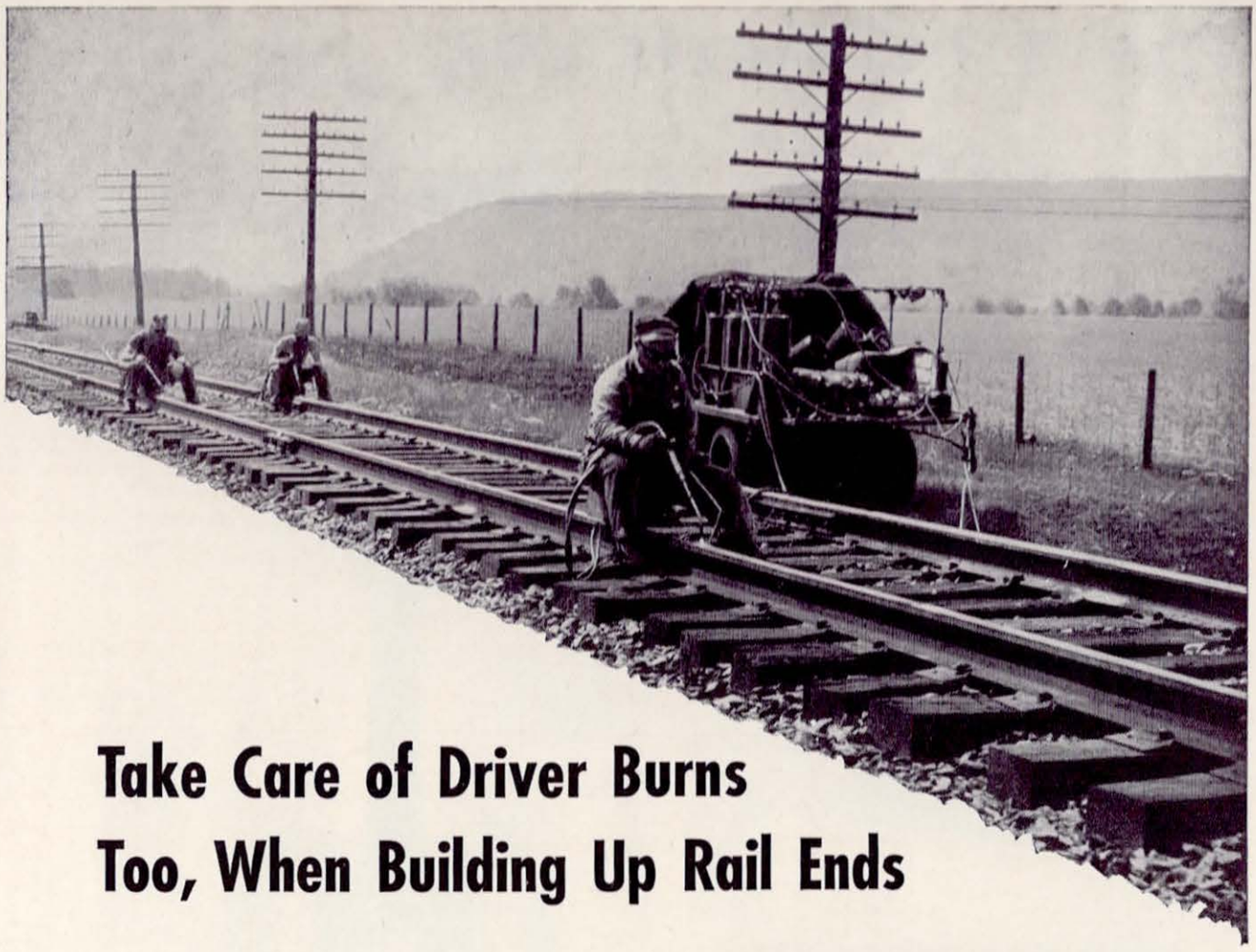
Besides manufacturing a full range of alloy steels, Bethlehem is always ready to provide metallurgical assistance to diesel builders. Our metallurgists will be glad to help solve problems concerning the analysis, heat-treatment, forging or machining of alloy steels.

BETHLEHEM STEEL COMPANY
Bethlehem, Pa.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

BETHLEHEM ALLOY STEELS



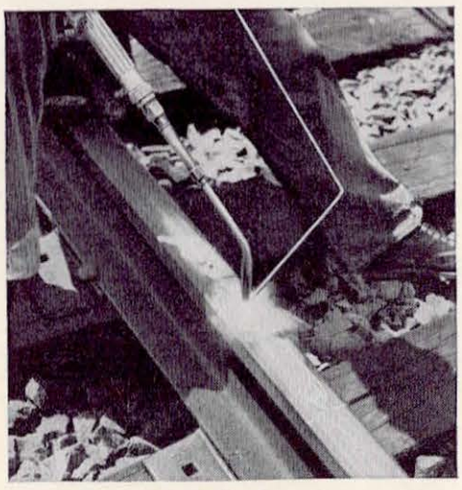
Take Care of Driver Burns Too, When Building Up Rail Ends

When your rail-end welding gangs are out on the job, driver burns can be repaired at the same time. Manpower, tools, and supplies are all on hand to do both jobs.

The pictures show how driver burns are removed by a large Eastern railroad. The gang shown is one of several out on the line using OXWELD MW rod to build up rail ends and eliminate driver burns. Frequent checks with the rail detector car in the last five years have shown that the original soundness of the rail has been restored.

Call on OXWELD for details on how this procedure can be adapted to your track programs.

"Oxweld" and "MW" are registered trademarks.



Here's how easily driver burns are built up with OXWELD MW rod.

OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

OXWELD RAILROAD SERVICE

SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

Vol. 133, No 24 December 15, 1952

RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.

Simmons-Boardman Publishing Corporation: James G. Lyne, President. Samuel O. Dunn, Chairman Emeritus. J. S. Crane, Vice-President and Secretary. C. Miles Burpee, Harry H. Melville, C. W. Merriken, John R. Thompson, William H. Schmidt, Jr., J. S. Vreeland, Fred W. Smith, Vice-Presidents. Robert G. Lewis, Assistant to President. Arthur J. McGinnis, Treasurer. Ralph E. Westerman, Assistant Treasurer.

EDITOR ..... James G. Lyne
EDITORIAL CONSULTANT ..... Samuel O. Dunn
EXECUTIVE EDITOR ..... William H. Schmidt, Jr.
MANAGING EDITOR ..... C. B. Tavenner
NEWS & FINANCIAL EDITOR ... Gardner C. Hudson
WASHINGTON OFFICE . . .
Walter J. Taft Joe W. Kizzia
TRAFFIC & TRANSPORTATION DEPARTMENT . . .
Robert G. Lewis John W. Milliken
John S. Gallagher, Jr.
MECHANICAL DEPARTMENT . . .
C. B. Peck E. L. Woodward
H. C. Wilcox C. L. Combes G. J. Weihofen
ELECTRICAL DEPARTMENT ..... Alfred G. Oehler
ENGINEERING DEPARTMENT . . .
M. H. Dick Henry E. Michael
Radford E. Dove Ralph M. Schmidl
PURCHASES & EQUIPMENT ..... Fred C. Miles
SIGNALING & COMMUNICATIONS DEPARTMENT . . .
John H. Dunn Robert W. McKnight
WESTERN NEWS DEPARTMENT ... Arthur M. Cox, Jr.
ASSOCIATE EDITOR ..... Charles Layng
LIBRARIAN ..... Edith C. Stone
EDITORIAL ASSISTANT ..... Frederick E. Colwill

Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price to railroad employees only in U. S., U. S. possessions, Canada and Mexico, $4 one year, $6 two years, payable in advance and postage free. Subscription price to railroad employees elsewhere in the Western Hemisphere, $10 a year; in other countries, $15 a year—two-year subscriptions double the one-year rate. Single copies 50¢, except special issues $1. Address Robert G. Lewis, Assistant to President, 30 Church Street, New York 7.

IN THIS ISSUE

EDITORIAL COMMENT:

Plowman's Prophecy 47
The Other Side of the Tracks 48

FEATURE ARTICLES:

A New Approach to Volume Ticket Sales 49
Canton Railroad Expands Ore Dock, by W. H. Raff 52
Snow Removal in Mountain Districts, by L. Wylie 56
Serving Canada's Newest Province 58
This New Plant Will Test Traction Motors 60

NEWS FEATURES:

Arbiters Write Rule on More Than One Class of Service 11
Equality of Regulation and Competition of Carriers Is No. 1 Economic Problem, Says P. H. Middleton 11
Ten Months' Net Income Was $594 Million 12
Railroads Seek Dismissal of Lincoln Antitrust Case 14

DEPARTMENTS:

News of the Railroad World .. 11
Organizations 15
Equipment and Supplies 15
Supply Trade 16
Construction 17
Financial 18
Railway Officers 18
New and Improved Products .. 43
Benchmarks and Yardsticks .. 45
Freight Operating Statistics .. 70
Overseas 74
Current Publications 76

Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 79 West Monroe Street, Chicago 3, Ill. Branch Offices: 1081 National Press Building, Washington 4, D. C.—Terminal Tower, Cleveland 13, Ohio.—Terminal Sales Building, Portland 5, Ore.—1127 Wilshire Boulevard, Los Angeles 17, Cal.—244 California Street, San Francisco 11, Cal.—2909 Maple Avenue, Dallas 4, Tex.

Published by SIMMONS-BOARDMAN PUBLISHING CORPORATION, New York 7

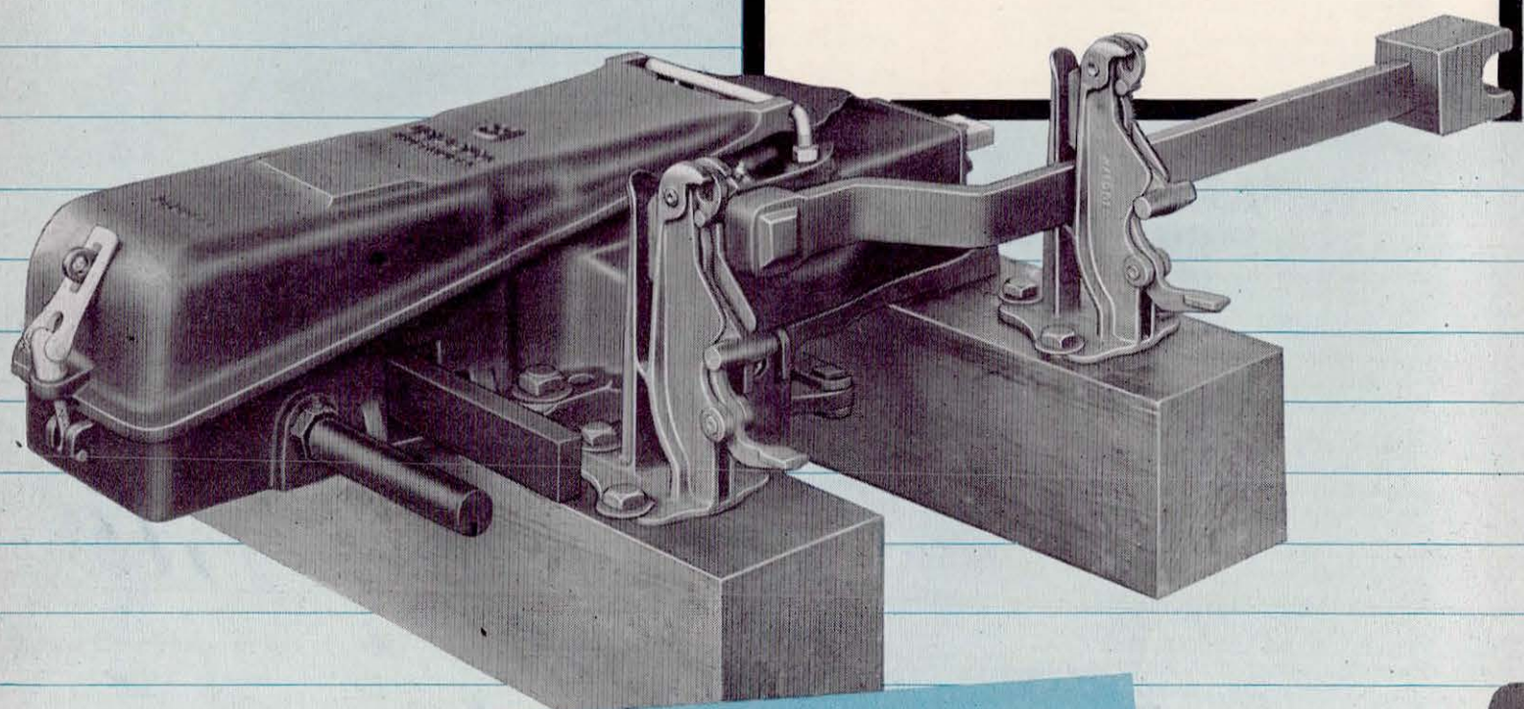
Railway Age Railway Mechanical & Electrical Engineer Railway Engineering & Maintenance
Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Directory
Books covering transportation and building

Railway Age is a member of Associated Business Publications (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service. Printed in U. S. A.

Here's a check list for
SWITCH STAND SERVICE

With "UNION" Switch Stands You Can CHECK ALL 10!

- ✓ 1. Safety
- ✓ 2. Ease of throwing
- ✓ 3. Genuine facing point lock protection
- ✓ 4. Strength and reliability
- ✓ 5. Ease of maintenance
- ✓ 6. Universal application
- ✓ 7. Circuit controller check of lock rod position
- ✓ 8. Independent circuit controller check of switch point position
- ✓ 9. Convenient application of electric switch locks
- ✓ 10. Long life



UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, ten months	
1952	$8,738,353,866
1951	8,586,370,241
Operating expenses, ten months	
1952	$6,680,407,118
1951	6,700,217,593
Taxes, ten months	
1952	$1,052,093,753
1951	984,057,603
Net railway operating income, ten months	
1952	$ 853,008,994
1951	732,823,912
Net income, estimated, ten months	
1952	$ 594,000,000
1951	492,000,000
Average price railroad stocks	
December 9, 1952	67.82
December 11, 1951	54.84
Car loadings, revenue freight	
48 weeks, 1952	35,311,988
48 weeks, 1951	37,799,088
Average daily freight car surplus	
December 6, 1952	5,902
December 8, 1951	7,775
Average daily freight car shortage	
December 6, 1952	1,532
December 8, 1951	4,316
Freight cars delivered	
November 1952	5,929
November 1951	9,824
Freight cars on order	
December 1, 1952	87,657
December 1, 1951	129,158
Freight cars held for repairs	
November 1, 1952	94,843
November 1, 1951	91,726
Average number of railroad employees	
Mid-October 1952	1,248,178
Mid-October 1951	1,271,168

In This Issue . . .

IT WAS PRETTY BLUNT TALK that the National Association of Manufacturers got at its recent New York meeting from NYC President William White. The excerpts from his talk quoted on page 48 cover only some of the high spots; omitted therefrom are some of the specific examples which Mr. White cited, where members of the ultra-conservative and supposedly anti-socialistic N.A.M. have acted suspiciously like exponents of socialism in transportation. It may be charitable to assume that they did so unwittingly—but after Mr. White's speech they can have no future excuse for "advocacy of creeping socialism" or for "thoughtlessly aimed brickbats" which help keep the railroads on the slum side of the economic tracks.

HOW THE SP's NEW TELEPHONE SALES OFFICE for passenger tickets works in actual practice is told in words and pictures—mostly pictures—on pages 49, 50 and 51.

MORE GAS TURBINE LOCOMOTIVES — 15 of them — have been ordered by the Union Pacific from the General Electric Company, along with 54 diesels from E.-M.D. Receipt of the former order, in 1954, will bring the UP's total turbine fleet to 25 units, which should be enough to give a pretty valid indication of the turbine's true capabilities, at least for conditions such as the UP encounters in some of its more rugged districts. Other equipment orders included 400 freight cars and 13 passenger-train cars, for seven different railroads.

SEPARATION OF FREIGHT AND PASSENGER traffic departments is due to become effective on the New York Central on January 1, with the December 11 announcement that Arthur E. Baylis has been elected vice-president, freight traffic, and Ernest C. Nickerson, now general traffic manager of the Chicago & North Western, has been elected vice-president, passenger traffic. Other NYC executive changes, also to become effective January 1, are: Karl A. Borntrager to vice-president, operations and maintenance; Martin J. Alger to vice-president staff; Frank J. Jerome to vice-president, engineering, development, research and real estate; and James J. Frawley to vice-president with special duties assigned by the president.

ARE THE RAILROADS USING a boy to do a man's job? In other words, are they using too little power on snowplows? There's an interesting discussion of that on pages 56-57.

AN ORE MOVEMENT RECORD was set by the railroads in the period between the end of the steel strike and the close of Great Lakes navi-

WEEK AT A GLANCE

gation, according to the A.A.R.'s Car Service Division. By setting that record, the rails made it possible to put the season's total ore shipments "over the top" of the 75-million-ton goal needed to stockpile steel mills for the winter.

WHO'S GOING TO PAY? That was the pertinent question addressed to the Automobile Club of Maryland in a recent speech by W. Arthur Grotz, president of the Western Maryland (page 66). He was referring, of course, to the "nationwide advertising campaign" with the "clever name" of PAR—Project Adequate Roads—which has as its apparent goal the spending of *$105 billion on major highways alone* in the next 15 years. Mr. Grotz' question is one that is as yet wholly unanswered—and one that is a real puzzler—especially considering the already dizzy heights of existing taxes, the difficulty in meeting even present highway costs, and the patent unwillingness of those who use highways for profit (and for whose further profit PAR is primarily intended) to bear even their fair share of costs now being incurred.

In Washington . . .

A STANDARD RULE setting out terms and conditions under which train and engine service employees may be required to perform two or more classes of road service in a day or trip has been prescribed, with a dissenting opinion from labor representatives, by the arbitration board appointed pursuant to last spring's settlement of the wage-hour dispute with the conductors, engineers and firemen. The chairman of the board, Paul N. Guthrie, was immediately appointed to act as referee in "improvement factor" wage increase discussions, which began last week in Washington. Both events are reported in the news pages.

DATA JUST RELEASED, on October revenues, expenses and earnings, shows up just about as might have been expected. As compared with 1951, gross is up—a little; expenses, with the latest "cost-of-living" wage increase in effect, are also up—a little; taxes are up—a lot. As a result, N.R.O.I. and net are both down—the former a little; the latter just about 10 per cent. Detailed figures, and comparable figures for the first 10 months of this year and last, will be found in the news columns.

TRANSPORTATION is "the No. 1 economic problem which faces the new Congress," said P. Harvey Middleton, president of the Railway Business Association, in a statement issued last week. Unless that problem is solved, he said, "on a basis of equality in regulation and competition among the various types of carriers, not only railroads but all other forms of transportation face danger of nationalization." Further excerpts from Mr. Middleton's statement are quoted in the news pages.

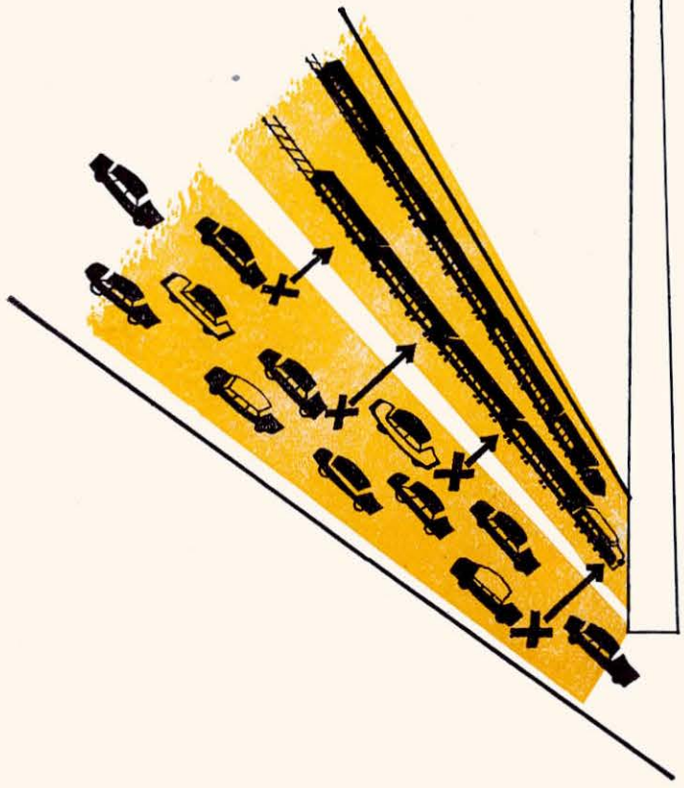
. . . And Elsewhere

NO DEFINITE DATE has been set—but at least one railroad is definitely planning a near-future installation, on a full operating basis, of commercial television. The railroad is the New Haven. Location of the proposed installation is the city of that same name—junction of the road's heavy-traffic Shore and Connecticut Valley lines, its change-over point between electric and diesel power, important passenger terminal, and (at nearby Cedar Hill) one of its major freight classification centers. As the project is now planned, TV cameras will be placed at a number of remotely controlled interlockings throughout New Haven terminal territory, with viewing screens in a single centrally located tower, permitting the operator in that tower to see everything that happens at the distant interlockings.

millions
are making the switch

from "Over the Road" Driving to the Railroads Through the HERTZ Rail-Auto Travel Plan

it will pay your road to help speed up this switch!



Recent surveys and constant checking of "out-of-town" rentals, indicate that thousands and thousands of people are now traveling by train who formerly drove their own cars long distances merely to have a car to drive at their destinations. They have switched to rail travel, and these surveys indicate that these Rail-Auto passengers traveled over 500 million miles on the railroads in 1951!

If your railroad is not joining with the other leading lines in co-operating with the Hertz Rail-Auto Travel Plan, you are failing to help hasten the switch that can return vast lost revenue back to the railroads. Hertz' continuous advertising in 2 and 4-color pages in Life, Saturday Evening Post, Collier's, Holiday, National Geographic, Time, Newsweek, U. S. News & World Report and other publications . . . many thousands of Hertz Rail-Auto folders distributed yearly . . . constant promotion of the plan by the railroads in their own advertising . . . timetables . . . literature . . . these are steadily producing startling results.

But remember, this private auto long distance travel is estimated at 500 *billion* passenger miles yearly! Your railroad too, should be persuading its share of this amazing potential to use trains and get their cars at destination through the Hertz Rail-Auto Travel Plan. Hertz, world's largest car rental organization, with more than 700 stations in more than 500 cities throughout the United States, Canada, Great Britain, Mexico, Hawaii, Alaska and Switzerland, created the Hertz Rail-Auto Travel Plan to provide travelers with new cars, at low rates and with gas, oil and insurance furnished when they arrive at their destinations. Great numbers of people, particularly vacationists and business people, now are using the Rail-Auto Plan regularly. For complete details, write Hertz Driv-Ur-Self System, Inc., Dept. D12, 218 South Wabash Avenue, Chicago 4, Illinois.

Rail Credit Cards—are honored at all Hertz stations. They serve as identification, eliminate deposit requirements, and provide credit privileges if desired.

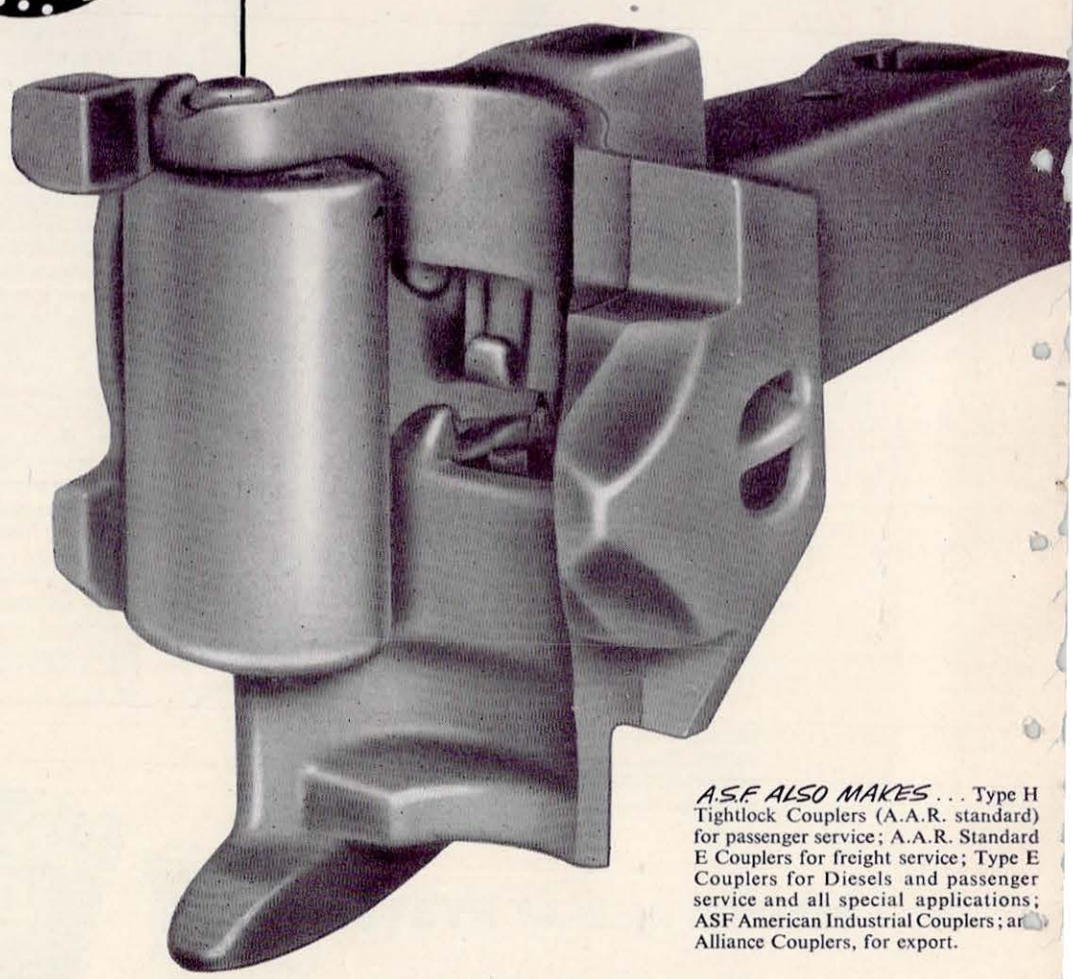
HERTZ *Driv-Ur-Self* **SYSTEM**

Anti-Creep protection!

ASF

Type F Interlocking Couplers

FOR FREIGHT SERVICE



Reduced . . . the danger of accidental uncoupling! The rotary locklift arrangement of the Type F (proposed A.A.R. standard) Interlocking Coupler gives *threefold* anti-creep protection.

First, a special overlapping toggle arrangement keeps the lock from jumping upward when there is vertical oscillation of the car. Second, this same overlapping toggle principle prevents unlocking when there is a run-in of slack combined with car bounce or coupler droop. Third, also in connection with run-in of slack and car bounce, the anti-creep shoulder of the rotor lever jaw strikes an abutment of the coupler head, for further protection.

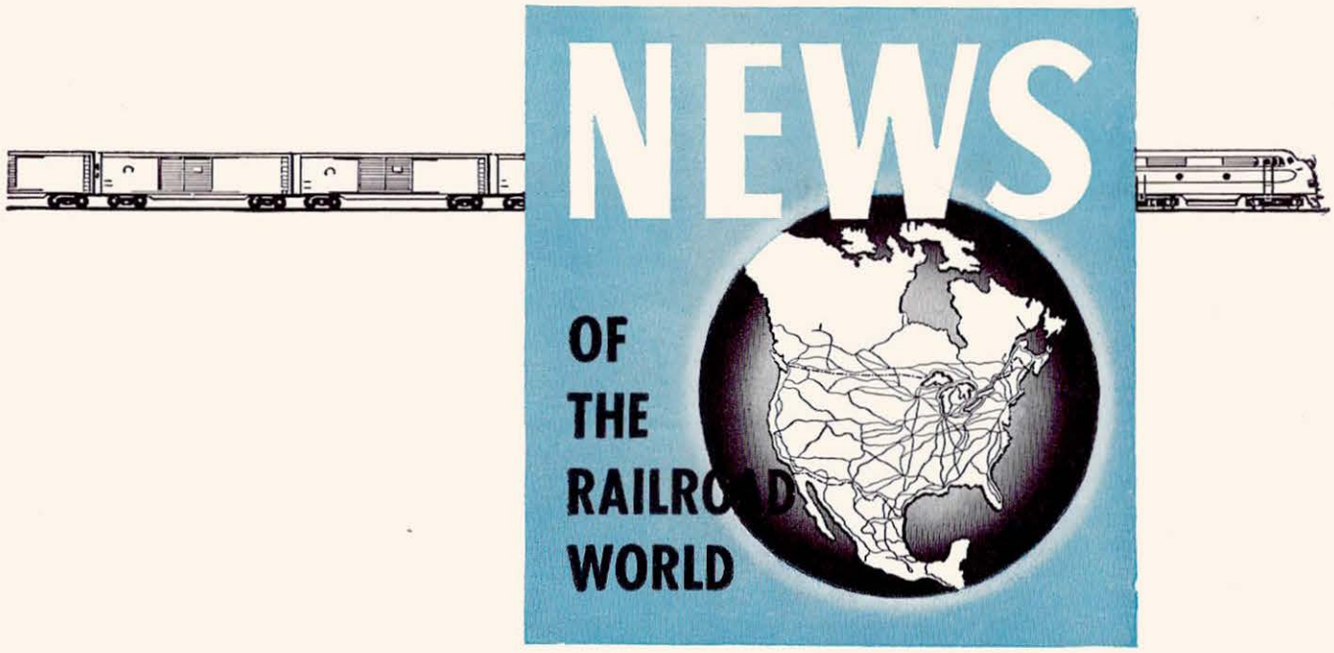
Ask for ASF folder C2! It illustrates and explains these features in detail. You'll want to investigate, then specify ASF-built Type F Interlocking Couplers for new freight cars.

A.S.F. ALSO MAKES . . . Type H Tightlock Couplers (A.A.R. standard) for passenger service; A.A.R. Standard E Couplers for freight service; Type E Couplers for Diesels and passenger service and all special applications; ASF American Industrial Couplers; and Alliance Couplers, for export.

AMERICAN STEEL FOUNDRIES

410 N. Michigan Ave., Chicago 11, Illinois • Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

Mint Mark of ⬡ Fine Products



Arbiters Write Rule on More than One Class Of Service for Train and Engine Employees

An arbitration board functioning under provisions of the Railway Labor Act has prescribed a standard rule setting out terms and conditions under which train and engine service employees may be required to perform two or more classes of road service in a day or trip. The arbitration proceeding was an aftermath of last May's settlement of wage and rules disputes involving operating employees.

The settlement provided for arbitration of that phase of the disputes which related to the more-than-one-class-of-service rule. The "standard" rule prescribed by the board of arbitration provides generally that employees called upon to perform more than one class of service shall be paid for the entire service at the highest rate applicable to any class of service performed, receiving at such rate full payment for their regular day or trip plus extra compensation on a minute basis for all additional time required in the other class of road service.

Other provisions of the rule stipulate that when two or more locomotives of different weights on drivers are used during a trip or day's work, the highest rate applicable to any locomotive used shall be paid to enginemen for the entire trip or day. As to overtime rates, the rule provides that they shall apply to the extra compensation "only to the extent that the additional service results in overtime for the entire day or trip or adds to overtime otherwise payable for hours required for the regular trip."

Under terms of the arbitration agreement the board's award becomes effective 60 days after the date (December 3) of its filing with the clerk of the United States District Court for the District of Columbia—"except on such carriers as may elect to preserve existing rules or practices . . . and so notify the authorized employee representatives on or before 30 days after the date on which such award is filed." On roads where it becomes effective, the new rule is to continue in effect until September 30, 1953, "and thereafter subject to notices served in accordance with Section 6 of the Railway Labor Act. . . . "

There were nine members of the arbitration board—three neutrals, three representatives of management, and three representatives of interested employees. The board's chairman, Paul N. Guthrie, was one of the neutral members, the other two having been William E. Simkin and A. Langley Coffey. Management representatives were F. J. Goebel, D. P. Loomis and F. K. Day, Jr. Employee representatives were Guy L. Brown, William C. Lash and W. D. Johnson.

The three labor members filed a dissenting opinion, and another came from one of the neutrals—Mr. Coffey.

Equality of Regulation and Competition of Carriers Is No. 1 Economic Problem, Says P. H. Middleton

This country is confronted with a transportation problem so serious that unless it is solved on a basis of equality in regulation and competition among the various types of carriers, not only railroads but all other forms of transportation face danger of nationalization, according to P. Harvey Middleton, president of the Railway Business Association. Transportation, he said in a December 9 statement, is "the No. 1 economic problem which faces the new Congress." He added that continuation of our entire system of private enterprise depends upon its solution."

"If the privately owned and completely self-supporting railways," his statement said in part, "lose out in their struggle against their subsidized competitors, the first step would be nationalization of the railways, followed inevitably by the taking over of all other forms of transport. The subsequent pattern would be much the same as in other countries under similar conditions: socialism with all its attendant evils would soon be in

full control; commercial principles would be subordinated to political and bureaucratic considerations, and extravagance would replace efficiency and economy."

Mr. Middleton pointed out that laws for regulation of commercial transportation "date back to the days when the whistle of a steam locomotive and the clop-clop of horses' hoofs signified our only major methods of carrying goods and people in domestic commerce. . . . There have been many amendments to the Interstate Commerce Act. But despite all the patching of that well-worn instrument, and the best intentions of a highly respected Interstate Commerce Commission, it has failed to keep pace with the march of progress.

Railway Solvency A National Asset

"There is no cheaper insurance for the nation as a whole than for the regulatory authorities to permit the railways to earn enough to maintain and improve their properties and pay a reasonable return to those whose money is needed to keep the railways going. The drying up of the sources of private capital because of poor earnings and unreasonable delays in rate adjustments, constitute a serious threat to railway solvency."

A subsidy to railroads themselves "is not the answer," Mr. Middleton said, but his statement outlined the "essentials" of a "program of remedial legislation," which included congressional declaration of "the need for adequate railway revenues"; faster action on rate increases required by increased costs; a rewording of the rule of rate making; I.C.C. power to review state action on service curtailments; publicity for contract carrier rates; repeal of the long-and-short-haul clause; dissolution of the Federal Barge Lines; charges for use of publicly provided highways, airways and waterways; I.C.C. approval of new waterway projects; and consideration of the effect on existing services of grants of authority for new services.

Ten Months' Net Income Was $594 Million

Class I railroads in the first 10 months of 1952 had an estimated net income, after interest and rentals, of $594,000,000, an increase of more than $100,000,000 over the same period of 1951. Net income for the 10 months of 1951 was $492,000,000.

These figures, based on reports filed by the carriers, were compiled and made public by the Bureau of Railway Economics of the Association of American Railroads.

Net railway operating income in the 10-month period this year totaled $853,008,994, compared with $732,823,912 in the first 10 months of 1951.

Estimated results for October 1952 showed net income of $92,000,000, compared with $102,000,000 in October of last year. The October 1952 net railway operating income was estimated at $120,668,578. During the like month last year net railway operating income totaled $125,802,327.

In the 12 months ended with October, the rate of return averaged 4.24 per cent, compared with 3.75 per cent for the 12 months ended with October 1951.

Gross in the first 10 months of 1952 amounted to $8,738,353,866, an increase of 1.8 per cent over the 1951 period, when gross amounted to $8,586,370,241. Operating expenses in the 1952 period were $6,680,407,118, compared with $6,700,217,593, a decrease of 0.3 per cent.

Twenty Class I roads failed to earn interest and rentals in the first 10 months of 1952, according to the A.A.R. report.

CLASS I RAILROADS—UNITED STATES	1952	1951
	Month of October	
Total operating revenues	$985,214,968	$965,810,712
Total operating expenses	707,482,556	696,947,250
Operating ratio—percent	71.81	72.16
Taxes	139,823,853	124,998,764
Net railway operating income (Earnings before charges)	120,668,578	125,802,327
Net income, after charges (estimated)	92,000,000	102,000,000
	Ten months ended October 31	
Total operating revenues	$8,738,353,866	$8,586,370,241
Total operating expenses	6,680,407,118	6,700,217,593
Operating ratio—percent	76.45	78.03
Taxes	1,052,093,753	984,057,603
Net railway operating income (Earnings before charges)	853,008,994	732,823,912
Net income, after charges (estimated)	594,000,000	492,000,000

DETAILS of the St. Louis-San Francisco's new evening news broadcast are worked out by Clark Hungerford (left), president of the railroad, and Lindley Hines, a newscaster for station KMOX at St. Louis. The Frisco is sponsoring three 15-minute programs each week.

New Rules for I.C.C. Fourth Section, Suspension Boards

Special rules of practice governing procedures of its Board of Suspension and Fourth Section Board were adopted by the Interstate Commerce Commission, effective December 1.

One of the new rules provides that, when the Board of Suspension has declined to suspend a tariff, petitions for reconsideration may be filed not less than 10 days before the effective date of the tariff, and answers must be filed at least five days before such effective date. Presumably this contemplates more expeditious action on the part of the board, which, in the past, has not ordinarily acted 10 days in advance of the tariff's effective date.

Others of the new rules provide that proceedings of the two boards shall be informal, without records, subpoenas or oaths; and that petitions for reconsideration of the suspension of tariffs and of any action of the Fourth Section Board may be filed within 30 days of the service of notice of such action.

Higher Reefer Rentals Become Effective Jan. 1

Increases in refrigerator car mileage rates paid by the railroads will become effective January 1. The rate on general-purpose reefers will go up from three cents per mile to 3.5 cents, while that on RB type reefers will be raised from 2.5 cents to 3.2 cents.

This has been announced by the Operating - Transportation Division of the Association of American Railroads.

The announcement followed approval of the increases by subscribers to the Bulwinkle-Act agreement covering per diem and demurrage, to whom the matter was submitted by letter ballot. It was reported erroneously in *Railway Age* of November 10, page 16, that only member roads of the A.A.R. had been asked to vote.

California Blizzard Halts SP Streamliners

Northern California's "worst storm of the year" hurled a barrage of rain and snow at velocities reported at from 70 to 100 m.p.h. on December 7. Operation of the Southern Pacific's lines between San Francisco and Portland, as well as those of the Northwestern Pacific into north coastal California, were halted for more than 24 hours, as drifting snow buried rails as fast as they could be plowed.

The SP's "Shasta Daylight," a Seattle-bound convention special, the "Klamath" and the "Cascade" were halted at Dunsmuir, Cal., for more than 24 hours. Three other trains were halted at Klamath Falls, where the town was without electricity for several hours because power transmission lines were wrecked by wind. Snow plows ultimately cleared lines for the trains to continue; none of the estimated 1,370 passengers were reported discomfited by the storm.

Over-Regulation Assailed At N.Y. RR Club Dinner

Government over-regulation of railroads, and usurpation of management functions by federal and state commissions, have damaged railroad earnings and are against the public interest, according to Thomas L. Parkinson, president of the Equitable Life Assurance Society.

Mr. Parkinson and the heads of three other large companies sharply criticized bureaucratic control of railroads in messages which were prepared for delivery at the 80th anniversary dinner of the New York Railroad Club on December 11. The others were H. P. Liversidge, chairman of the board of the Philadelphia Electric Company; Charles M. White, president of Republic Steel Corporation, and Don G. Mitchell, president of Sylvania Electric Products, Inc.

"Over-regulation," contended Mr. Parkinson, "has done its greatest harm by strait-jacketing rate making and abandonments of unprofitable services with the result that [railroad] earnings have been hurt, to the detriment of the public, because these curtailed earnings do not allow the roads to make full use of all available technological improvements. Interstate Commerce Commission rate prescriptions have been too little, too late and too inelastic to keep pace with rapidly rising labor and material costs and the receding purchasing power of the dollar. Insistence that unprofitable services be continued appear to have compounded the felony against earnings."

Mr. Liversidge's message ran along parallel lines. Bureaucratic expansion aimed at state socialism, he held, is imperilling railroads and other segments of our economy and enmeshing our business life in a tangle of rules and administrative orders. There is, he acknowledged, a need for reasonable regulation of public utilities. "But when governmental agencies assume the prerogative of management and exercise unlimited jurisdictional powers the result is not regulation. It is regimentation. Under such a system, management becomes subservient to a form of bureaucratic dictatorship."

Mr. White foresaw another great era ahead for railroads—"but it will not come until railroad people win for themselves a greater freedom to fight out their issues with one another, with business and with the public than they are permitted today." Mr. Mitchell said railroads should be relieved of restrictive regulations that hamper their ability to effect economies or to improve their service. "Regulation should be such that it encourages railroads to provide the best in standard transportation at lower cost than others can offer."

Hiltz Outlines Four Ways To Cut Maintenance Costs

Railroad maintenance of way forces can achieve further substantial economies in their operations, J. P. Hiltz, Jr., engineer maintenance of way of the Delaware, Lackawanna & Western, told the New England Railroad Club on December 9.

These savings may be obtained, Mr. Hiltz said:

- By getting more production out of maintenance machinery, by improving such machinery and using it in new and better ways, by properly programming and scheduling it, and by maintaining it in such a way that "out of service" time is kept to a minimum;
- By obtaining the best materials available, using them in the proper manner, and conserving them to the greatest extent after they have been put in use;
- By using money allotted to maintenance work "to the best advantage of the property"; and
- By "selling" management on the idea that maintenance-of-way work is work which must be done "as long as a wheel rolls on the rails," that this work should be done at certain indicated times for the preservation of the property, and that it can only be done properly and economically if money is allotted to the maintenance department in such a way that competent engineering supervision can work out long-range programs.

Freight Car Loadings

Loadings of revenue freight in the week ended December 6 totaled 719,159 cars, the Association of American Railroads announced on December 11. This was an increase of 48,992 cars, or 7.3 per cent, compared with the previous holiday week; a decrease of 54,371 cars, or 7 per cent, compared with the corresponding week last year; and a decrease of 47,736 cars, or 6.2 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended November 29 totaled 670,167 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 29

District	1952	1951	1950
Eastern	112,210	138,390	119,343
Allegheny	141,955	167,691	116,232
Pocahontas	51,427	66,956	54,106
Southern	115,938	140,802	134,764
Northwestern	88,365	105,074	108,113
Central Western	107,447	136,051	139,686
Southwestern	52,825	66,812	67,921
Total Western Districts	248,637	307,937	315,720
Total All Roads	670,167	821,776	740,165
Commodities:			
Grain and grain products	39,011	58,694	55,022
Livestock	9,003	10,950	11,809
Coal	126,683	175,456	132,607
Coke	14,477	16,974	11,931
Forest products	39,288	47,556	47,122
Ore	43,455	41,672	34,589
Merchandise l.c.l.	62,174	73,669	79,408
Miscellaneous	336,076	396,805	367,677
November 29	670,167	821,776	740,165
November 22	810,922	711,447	701,551
November 15	828,723	814,258	837,458
November 8	829,198	791,403	839,880
November 1	862,012	837,617	863,149
Cumulative total 48 weeks	35,311,988	37,799,088	36,013,019

In Canada.—Carloadings for the 10-day period ended November 30 totaled 95,284 cars, compared with 85,855 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada: November 30, 1952	95,284	36,446
Cumulative Totals November 30, 1952	3,833,508	1,620,807

Post-Strike Iron Ore Traffic Sets Record

Since the end of the steel strike last summer, the railroads have hauled more iron ore than in any similar period in their history, Arthur H. Gass, chairman of the Car Service Division of the Association of American Railroads, said in a December 4 statement.

Between August 3 and November 29, a total of 1,490,934 cars of iron ore was moved by the railroads, an increase of 19.3 per cent over the 1,249,761 cars moved in the same period of 1951, Mr. Gass declared. In this time, average weekly loadings of ore were approximately 90,000 cars, he added.

In this 17-week period, the railroads moved more than 52,288,000 tons of ore from mines in the Lake Superior region to the head of the Great Lakes for shipment by boat to lower lake points, Mr. Gass stated. These shipments amounted to more than 3,000,000 tons each week. While complete figures are not yet available, the Ore & Coal Exchange estimates a total of slightly more than 75,000,000 gross tons of iron

THIS GOLD BOX CAR AWARD was presented to Santa Fe Division Freight Agent O. C. Honig (center) in recognition of outstanding freight sales work in behalf of the road's Beaumont (Tex.) office. The award highlighted a recent staff meeting of Santa Fe freight representatives in Texas and Mexico. Presentation was by Clark Davis (on Mr. Honig's left), freight traffic manager, Galveston, as J. A. Dana, general freight agent, Galveston, F. E. Benton, traveling agent, Beaumont (both on left), and F. H. Rockwell, general freight traffic manager, Chicago (on right), look on.

ore will have been transported down the Great Lakes between the opening of navigation early in April and the departure of the last boat from the Duluth-Superior docks on December 4, Mr. Gass said.

The C. S. D. chairman pointed out that the railroads were called upon to move a substantially increased tonnage of iron ore entirely by rail immediately following the 55-day steel strike to assist in building up stockpiles to assure winter steel production after the closing of shipping on the Great Lakes.

"Now that the shipping season has closed on the Great Lakes, the railroads with their all-weather transportation service will continue to move ore directly from mines to steel mills, but because of the success achieved in building stockpiles, this all-rail movement of ore will probably not be as large as originally thought," Mr. Gass declared.

He added that "the apprehension that existed earlier that ore shortages might cause the closing of mills prior to the opening of spring navigation on the Great Lakes has been entirely allayed."

Railroads Seek Dismissal Of Lincoln Antitrust Case

Western railroads and the Association of American Railroads on December 5 filed a motion for dismissal of the so-called Lincoln case, which involves the federal government's antitrust complaint against them. The motion was filed in the federal district court at Lincoln, Neb., where the case is pending.

The government's complaint alleges that the defendants were parties to various agreements, with respect to rates and services, which violated the antitrust laws. The court proceedings have been held in abeyance since October 1950. The court granted an indefinite continuance at that time, when the United States Supreme Court dismissed Georgia's like complaint against eastern and southern railroads and the railroads had pending before the Interstate Commerce Commission their application for approval of rate-procedures agreements under Section 5a of the Interstate Commerce Act.

In their December 5 motion to dismiss, the railroads said that charges to the effect that joint actions with respect to rates were unlawful had been identified by Department of Justice attorneys as the "heart" of the Lincoln case. But passage of the Bulwinkle-Reed Act, which added Section 5a to the I.C. Act, and I.C.C. orders approving the railroads' Bulwinkle-Act agreements, "have relieved defendants from operation of the antitrust laws in respect to such rate activities," and, "upon the facts and the law," the government "has shown no right to relief," the motion also said.

As to the complaint's charges and allegations concerning matters other than rates, the motion had this to say: "Plaintiff's evidence shows that the conduct alleged and relied upon by it as to such matters has either been abandoned or is shown to have occurred so long prior to the institution of this suit in 1944 that such evidence is stale, that it has no present probative value or significance and is insufficient in law to support injunctive relief."

The motion went on to recall that the Lincoln court had said in 1945 that the "object and basic averments" of the Georgia case were "so strikingly comparable" to those of the Lincoln case that action by the U. S. Supreme Court in the former would be "compellingly persuasive, if not absolutely controlling, in the present instance." The motion then closed with this assertion: "The record requires the dismissal of the complaint and the public interest will be fully protected by a dismissal without prejudice."

G. C. Randall Addresses N.Y. Chapter of N.D.T.A.

George C. Randall, manager port traffic of the Association of American Railroads, was guest speaker at the December 4 meeting of the New York Chapter of the National Defense Transportation Association. Mr. Randall, in a discussion of "Railroad Progress in Connection with Port Transportation," outlined changes in handling traffic through ports in recent years, with special emphasis on evolution of methods and equipment.

Truman Names Referee on "Improvement" Wage Raise

Representatives of railroad managements and employees began discussions of "improvement factor" wage increases in Washington, D. C., last week. The negotiations were conducted by Paul N. Guthrie, a referee appointed by President Truman.

Mr. Guthrie got this assignment just as he completed work as chairman of an arbitration board which made a December 3 report prescribing a more-than-one-class-of-service rule covering road-service employees.

Holiday Travelers Get Advice from Knudson

Defense Transport Administrator James K. Knudson issued a December 9 statement to advise civilian travelers to schedule their holiday journeys so

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended December 6 were announced by the Association of American Railroads on December 11 as follows:

	Surplus	Shortage
Plain Box	1,185	893
Auto Box	0	18
Total Box	1,185	911
Gondola	428	309
Hopper	1,092	91
Covered Hopper	46	48
Stock	1,090	0
Flat	304	173
Refrigerator	1,510	0
Other	247	0
Total	5,902	1,532

as to avoid, if possible, travel during the period from December 20 through 22 and over week-end of January 2-5.

Mr. Knudson noted that the military leave period will fall between December 20 and January 5. "The Department of Defense," he said, "is to be commended for staggering dates of servicemen's holiday leave in an effort to eliminate any undue congestion at transportation terminals."

Nevertheless, the D.T.A. administrator expected that civilian travel "may still create some problems" because many concerns are observing a four-day Christmas holiday.

Christmas Mail Traffic Will Be Above Last Year

The railroads will be called upon by the Post Office Department this month to move an estimated 5,765,315,000 pieces of Christmas mail, an increase of more than five per cent over the same period last year, according to the Association of American Railroads.

If equally distributed among the entire population of the United States, the number of pieces of intercity mail earmarked for movement by rail during the December 1-25 period would give every American, including members of the armed forces serving abroad, more than 36 gifts and greeting cards, according to the Post Office Department.

To haul this large volume, the railroads, which normally move about 99 per cent of all non-local parcels and letters, must provide 3,768,190 feet of mail car space, postal officials estimate. This footage is equivalent to 62,800 standard-size mail cars over 60 feet in length. If loaded simultaneously, the cars would be sufficient to make up more than 5,230 mail trains consisting of 12 cars each.

The number of sacks of mail to be handled by the railroads this month, according to postal computations, will total 56,522,700, an increase of 2,850,300 sacks over the Christmas season last year.

Due to an acute shortage of floor space at many of the larger post offices and terminals, the railroads must accelerate the delivery of holiday mail this month, pressing into service extra cars capable of handling the Christmas mail wherever necessary, postal officials point out. In addition to expediting letters and parcels, the railroads during the 25-day peak period will be moving thousands of cars of express and freight loaded with Christmas merchandise, the A.A.R. said.

Agents Selling Transport By Air Warned by C.A.B.

Air transportation ticket agents have been warned by the Civil Aeronautics Board against engaging in trade prac-

(*Continued on page 66*)

ORGANIZATIONS

At the recent annual meeting of the **Diesel Engine Manufacturers Association,** held in New York, the following officers were elected for 1953: President, A. W. McKinney, executive vice-president, National Supply Company, Pittsburgh; vice-presidents, Walter A. Rentschler, vice-president, Baldwin-Lima-Hamilton Corporation, Philadelphia, and William E. Butts, president, Enterprise Engine & Machinery Co., San Francisco; treasurer, Robert H. Morse, Jr., president, Fairbanks, Morse & Co., Chicago; and secretary and executive director, Harvey T. Hill, Chicago.

The annual dinner of eastern Pennsylvania members of the **Transportation Association of America** was held in the Bellevue-Stratford Hotel, Philadelphia, on December 10. Revelle W. Brown, chairman of the executive committee of the Reading, a director of the T.A.A., and general chairman of its Central Atlantic forum, presided. About 200 business and financial leaders of Philadelphia attended the dinner, which was addressed by Donald D. Conn, executive vice-president of the association.

Two forthcoming luncheons for the association are being sponsored by Ernest E. Norris, chairman of the Southern. The first will be at the Wm. Barringer Hotel, Charlotte, N.C., on December 16, and the second at the Poinsett Hotel, Greenville, S.C., on December 18. Mr. Conn will address both luncheons.

Livingston Goddard, secretary-treasurer of the **Federation for Railway Progress** since 1947, has been appointed vice-president; Clifford H. Ramsdell, editor of Railway Progress magazine, has been appointed secretary-treasurer to succeed Mr. Goddard. Both appointments have been made pending the annual election of officers. Gordon Huffines, assistant editor of Railway Progress, has been promoted to managing editor.

TRAFFIC TIP *Fill out and hand to your supervisor*

_____ *(date)*

I understand that _____
(name of prospective customer)

whose address is _____

☐ may ship some freight } to _____

☐ may make a trip } from _____

☐ may locate a new plant

(Please sign your name) _____

(Position) _____

(Location) _____

THE NEW YORK CENTRAL is handing out, experimentally, these Traffic Tip cards to employees. A coupon, similarly composed, printed in the road's magazine, Headlight, got such good results that it was decided to carry the idea a step farther and issuance of the cards followed.

EQUIPMENT AND SUPPLIES

CNR Orders Equipment Costing $34,248,000

The Canadian National has ordered 3,760 freight-train cars and 30 passenger-train cars costing $34,248,000. Thirty 76-ft. baggage cars will be built by the National Steel Car Corporation. The freight-car orders were placed as follows: National Steel Car—1,000 70-ton ore, 200 50-ton refrigerator, 150 70-ton covered hopper, and 50 30-ton refrigerator cars; Canadian Car & Foundry Co.—1,200 50-ton box, 150 30-ton flat, and five 135-ton depressed center flat cars; Eastern Car Company—500 70-ton gondola, 300 70-ton triple hopper, 100 30-ton box, and 30 50-ton air dump cars; and Marine Industries, Ltd.—75 40-ton gondola cars.

FREIGHT CARS

5,929 Freight Cars Delivered in November

New freight cars delivered in November for domestic use totaled 5,929, reflecting a slight increase in the amount

ONE OF THE SIX gas turbine electric locomotives now in service on the Union Pacific between Ogden, Utah, and Green River, Wyo. The road has ordered 15 more of the power units from the General Electric Company (see Equipment & Supplies, Locomotives, below), which, with the four locomotives yet to be delivered of the original order for 10, will increase the UP's roster of this type of motive power to 25 units.

of steel available, the American Railway Car Institute and the Association of American Railroads have announced jointly. October deliveries amounted to 5,437. Deliveries in November 1951 were 9,824.

New freight cars ordered in November aggregated 2,878, the announcement added, and the backlog of cars on order on December 1 was 87,657.

A breakdown by types of cars ordered and delivered in November and of cars on order on December 1 appears in the accompanying table.

Type	Ordered Nov. '52	Delivered Nov. '52	On Order & Undelivered Dec. 1, '52
Box—Plain	25	1,385	22,422
Box—Auto	0	1	749
Flat	0	135	3,765
Gondola	75	1,346	19,675
Hopper	232	1,964	22,805
Covered Hopper	1,400	263	6,613
Refrigerator	0	309	3,726
Stock	0	180	0
Tank	130	315	6,090
Caboose	16	4	186
Other	1,000	27	1,626
TOTAL	2,878	5,929	87,657
Carbuilders	2,466	4,032	52,254
Railroad Shops	412	1,897	35,403

The **Chicago Heights Terminal Transfer** has ordered 25 50-ton box cars from the American Car & Foundry Co.

The **Gulf, Mobile & Ohio** has ordered 100 50-ton pulpwood cars from its own shops for delivery in the second quarter of 1953.

The **New York, New Haven & Hartford** has ordered 100 40-ft. flat cars from its Maybrook, N.Y., shops at an estimated cost of $8,500 each. The cars will be used in the road's trailer-on-flat-car service. Construction is expected to begin in January and the first cars are to be completed in February.

The **Reading** has ordered 100 50-ton pulpwood cars from the Bethlehem Steel Company at a cost estimated to be between $800,000 and $850,000. Delivery is scheduled for September 1953.

The **St. Louis Southwestern** has ordered 75 70-ton gondola cars from the Bethlehem Steel Company at an estimated cost of $525,000. Delivery is scheduled for July 1953.

LOCOMOTIVES

UP Orders 15 More Gas Turbines, 54 Diesels

The Union Pacific has ordered 15 additional gas turbine electric locomotives from the General Electric Company and 54 diesel units from the Electro-Motive Division of General Motors Corporation. The order for diesel locomotives includes eight "A" and 14 "B" 2,250-hp. passenger units, 10 1,500-hp. road-switchers and 22 1,200-hp. yard switchers, all for 1953 delivery.

Delivery of the new gas turbine locomotives is scheduled to begin early in 1954. Six units of the original order for 10 such locomotives have been delivered and the remaining four are scheduled for delivery next year. The 25 locomotives will involve an expenditure of over $14,000,000. Like their predecessors, each of the 15 additional gas turbine locomotives will develop 4,500 hp. They will be about 83 ft. long and will pull a heavily loaded freight train at speeds up to 65 m.p.h.

PASSENGER CARS

The **Atlanta & West Point** has ordered one 58-passenger coach from the Budd Company at an estimated cost of $142,000. The car, delivery of which is scheduled for the third quarter of 1953, will be used in the "Crescent Limited" between Atlanta, Ga., and New Orleans.

The **Chicago, Rock Island & Pacific** has ordered seven railway post office cars and five baggage cars from the Budd Company, to be assigned to the "Golden State" and trains of the streamlined "Rocket" fleet, as required. The R.P.O. cars will be 63½ ft. long from coupler to coupler. The baggage cars will be equipped to accommodate a train baggageman.

MISCELLANEOUS

The **New York Central** has ordered 11 Matisa tie-tamping machines from the Matisa Equipment Corporation, at a reported cost of approximately $580,000.

SUPPLY TRADE

Walter P. Arnold, formerly vice-president and executive assistant to general manager of the Wood Preserving division of **Koppers Company,** has been appointed vice-president and general manager of the division to succeed **Harry R. Condon,** who has retired after 25 years of service.

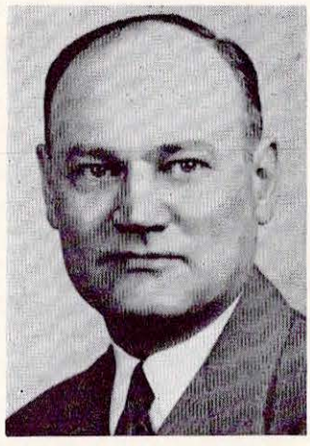
Mr. Arnold joined Koppers as a chemical engineer in 1925, and 10 years later became technical director for the division. He was transferred to Pittsburgh in 1946 as manager of railroad sales for the division and in 1950 was made executive assistant to vice-

J. Gordon Cavanagh has been appointed sales engineer of the Copperweld Steel Company's Wire and Cable division, covering the lower peninsula of Michigan and all of Indiana. His headquarters will be in Detroit, as were those of his predecessor, Donald T. Jones, who is on leave of absence for service with the U.S. Navy.

John E. Angst, whose appointment as assistant western sales manager of the American Car & Foundry Co., at Chicago, was reported in *Railway Age*, December 1, page 18.

---

president and general manager. He was appointed to a divisional vice-



Walter P. Arnold

presidency in 1951. In his new position, Mr. Arnold will be responsible for all

---

Jack H. Gill, who has been appointed assistant manager of the industrial division of the general sales department of Caterpillar Tractor Company, Peoria, Ill.

wood preserving activities of Koppers, including operation of 22 wood preserving plants throughout the country.

Charles Rager, district manager of **Fairmont Railway Motors, Inc.,** at St. Louis, has been appointed district manager at Chicago. Succeeding

Charles Rager

Mr. Rager is **George Adams,** former sales representative at Chicago. Mr. Rager has been associated with Fairmont since 1939, and was a representative at Chicago before being appointed district manager at St. Louis in 1946.

Mr. Adams joined Fairmont in 1935. He served at Fairmont, Minn., for two

George Adams

years and was later transferred to Washington, D.C.

The United States Steel Supply division of the **U.S. Steel Corporation** has appointed **John P. Connor** as district manager at Houston, Tex. Mr. Connor attended the University of Alabama, began his business career in 1937 in the general sales office of U.S. Steel's Tennessee Coal & Iron division at Birmingham, and during World War II served as a captain in the Army Air Forces. He returned to the T. C. & I. as a sales representative at New Orleans in 1946, was transferred to Dallas in 1948, and from 1949 until his present appointment was a sales representative at Fort Worth.

Douglas Grymes, Jr., has been appointed manager of railroad sales

Douglas Grymes, Jr.

for the Wood Preserving division of the **Koppers Company.** Mr. Grymes has been assistant manager of railroad sales for the past three years. In his new post he will have supervisory responsibility for sale to railroads of ties, lumber and timber pressure-treated at the division's 22 plants.

OBITUARY

T. F. Scholes, president of T. F. Scholes, Inc., railway contracting firm of Reading, Pa., and president of the Associated Railway Track Contractors of America, died on November 23 when his private plane crashed while enroute from Reading to Camden, Ark.

CONSTRUCTION

UP to Spend $4 Million On New Kansas City Yards

Surveying has begun on a $4-million program to expand Union Pacific yard facilities in Kansas City. New yards, to go in west of 18th street, will contain 165,330 feet of track, and 37,280 feet of track will be added to present facilities. The new yard will be used in connection with eastbound traffic only. Westbound traffic will be handled in the present yard. It is expected that actual construction will get under way late this winter or in early spring.

D.T.A. Lists 1st Quarter Construction Approvals

Authority for the Union Pacific to work on a $14,750,000 line-relocation project during the first quarter of 1953

has been granted by the Defense Transport Administration. This project, at Cheyenne, Wyo., was among 116 which D.T.A. approved for construction in the first three months of next year.

Approval by D.T.A. authorizes allotment of controlled materials. Some of the approved projects are already under way, while work on others is scheduled to begin during the first quarter.

The estimated total cost of the 116 projects approved is $39,697,701. They include projects in all fields of domestic transportation over which D.T.A. has jurisdiction—railroad, street and highway, inland waterways, warehousing and storage, and port utilization.

Other large railroad projects, in addition to that of the UP, include the following:

Beaumont, Sour Lake & Western, relocation of line over San Jacinto reservoir, $2,155,410.

Chicago, Milwaukee, St. Paul & Pacific, classification yard at Bensenville, Ill., $2,222,429.

Chesapeake & Ohio, diesel servicing facilities, $773,850; construction of track to serve mine at Accoville, W. Va., $324,100; car thawing plant at Toledo, Ohio, $330,000.

New York, New Haven & Hartford, passenger train shed at Providence, R.I., $550,000. Here the applicant for authority was the Gilbane Building Company, which will construct the facilities for the New Haven.

Norfolk & Western, construction of spur track at Portsmouth, Ohio, $595,000.

St. Louis Southwestern, centralized traffic control between Dexter Junction, Ark., and Jonesboro, $968,000.

Southern Pacific, construction of additional tracks at Kaiser, Calif., $304,370.

Wabash, freighthouse facilities at Kansas City, Mo., $398,330.

FINANCIAL

Santa Fe Creates Bond Retirement Fund

A "Voluntary Bond Retirement Fund," which will be used in meeting 1995 maturities of the company's bonded debt, has been created by directors of the Atchison, Topeka & Santa Fe.

"Since the era of widespread railroad insolvency," said President Fred G. Gurley in announcing establishment of the fund, "we have gone through three distinct periods with reference to Santa Fe indebtedness:

(1) Depression years — 1933-1940 — when debt increased from $309.6 million to $334.5 million due to the necessity of borrowing to finance modest programs for purchase of new equipment.

(2) Wartime years—1941-1945—when all callable bonds were eliminated and some reduction effected in equipment obligations. Total debt was reduced to $230.5 million by the end of 1945.

(3) Postwar period — 1946-1951 — when expenditures for modernization and improvement were financed primarily by cash, and debt represented by equipment obligations was reduced to a low figure.

"We are now in a fourth period," he continued. "With callable bonds eliminated and equipment obligations nearing elimination, some new measure is needed to make further progress in this program."

Detailing the road's total funded debt of $203,552,496, Mr. Gurley explained that its 4 per cent general mortgage bonds, totaling $150,867,500, due October 1, 1995, and its 4 per cent adjustment bonds, totaling $48,792,500, due July 1 1995, were created at the time of the company's reorganization, with no sinking fund provisions and no provisions for calling either issue at any time prior to maturity. [The balance of the Santa Fe's funded debt consists of $3,892,496 of equipment trust certificates, which will be wholly retired by 1955.]

"This [bonded] debt [totaling $199,600,000] is a large amount to become payable all in one year," he added. "It is not possible to predict what economic conditions may prevail in 1995, and without some measure of protection in the form of substantial reserves, both management and stockholders could be confronted with a serious problem."

Therefore, he said, the directors "deemed it prudent and desirable to begin setting aside relatively small sums each year to provide a protective reserve." An initial appropriation of $1,213,530 was made into the fund from income and an arrangement set up whereby there shall be appropriated to that reserve twice each year an amount equal to the lesser of (a) 25 cents per share of outstanding common stock (equal to 50 cents per share per annum), or (b) 20 per cent of total dividends declared on the common stock during the preceding six months.

Funds so appropriated, and accruing interest and other income on the bond retirement fund, will from time to time be invested in (a) the company's outstanding bonds, (b) any bonds of other companies which are guaranteed in whole or in part by the Santa Fe, (c) U.S. government securities, or (d) any other securities which may be approved for the purpose by the directors.

"You will appreciate," Mr. Gurley's statement concluded, "that it is not possible to predict the end result of this fund. If conditions between now and 1995 are favorable, the fund should retire almost all of the debt due at that time. To the extent that some of the intervening years are unfavorable, there would, of course, be less money in the fund."

Canadian Pacific.—*Sale of Bonds.*—Through a Canadian investment syndicate headed by A. E. Ames & Co. and Wood, Gundy & Co., the CPR has sold, at par and accrued interest, $35 million of convertible 4 per cent collateral trust bonds, maturing in 1969. The bonds will be convertible between June 1, 1953, and June 1, 1960, into ordinary stock of the company, at the rate of 30 shares for each $1,000 of bonds.

Dividends Declared

ALLEGHENY & WESTERN.—$3, semiannual, payable January 2, 1953, to holders of record December 20.

CANADIAN PACIFIC.—75¢, payable in Canadian funds February 27, 1953, to holders of record December 30.

CHICAGO, BURLINGTON & QUINCY.—$4, payable December 29 to holders of record December 18.

CHICAGO, ROCK ISLAND & PACIFIC.—common $1, quarterly; preferred A $1.25, quarterly, both payable December 26 to holders of record December 12.

CHICAGO SOUTH SHORE & SOUTH BEND.—25¢, quarterly, payable December 15 to holders of record December 5.

COLORADO & SOUTHERN.—4% first preferred, resumed, $2, payable December 29 to holders of record December 18.

DELAWARE.—$1, semiannual, payable January 2, 1953, to holders of record December 15.

ELMIRA & WILLIAMSPORT.—7% preferred, $1.65, semiannual, payable January 2, 1953, to holders of record December 19.

MINNEAPOLIS & ST. LOUIS.—25¢, quarterly, and 10¢ extra, both payable December 22 to holders of record December 12.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, $1.75, quarterly, payable January 1, 1953, to holders of record December 10; 7% preferred, $1.75, quarterly; payable January 6, 1953, to holders of record December 10.

ROCHESTER & GENESEE VALLEY.—$2, semiannual, payable January 2, 1953, to holders of record December 20.

Security Price Averages

	Dec. 9	Prev. Week	Last Year
Average price of 20 representative railway stocks	67.82	66.81	54.84
Average price of 20 representative railway bonds	95.13	94.41	90.14

New Securities

Division 4 of the I.C.C. has **authorized:**

NORTHERN PACIFIC.—To assume liability for $6,375,000 of equipment trust certificates to finance in part 1,250 freight cars and eight diesel units (*Railway Age*, November 24, page 65). Division 4 approved sale of the certificates for 99.149—the bid of Halsey, Stuart & Co. and 12 associates—which will make the average annual cost of the proceeds to the road approximately 3.03 per cent. The certificates, dated December 16, will mature in 15 annual installments of $425,000 each, beginning December 16, 1953. The certificates were reoffered to the public at prices yielding from 2.2 to 3.05 per cent, according to maturity.

ST. LOUIS-SAN FRANCISCO.—To assume liability for $2,805,000 of series K equipment trust certificates to finance in part 550 freight cars costing an estimated $3,512,769 (*Railway Age* of November 10, page 72). Division 4 approved sale of the certificates for 99.4243—the bid of Salomon Brothers & Hutzler and three associates—which will make the average annual cost of the proceeds to the road approximately 2.98 per cent. The certificates, dated December 1, will mature in 15 annual installments of $187,000 each, beginning December 1, 1953. The certificates were reoffered to the public at prices yielding from 2.2 to 3 per cent, according to maturity.

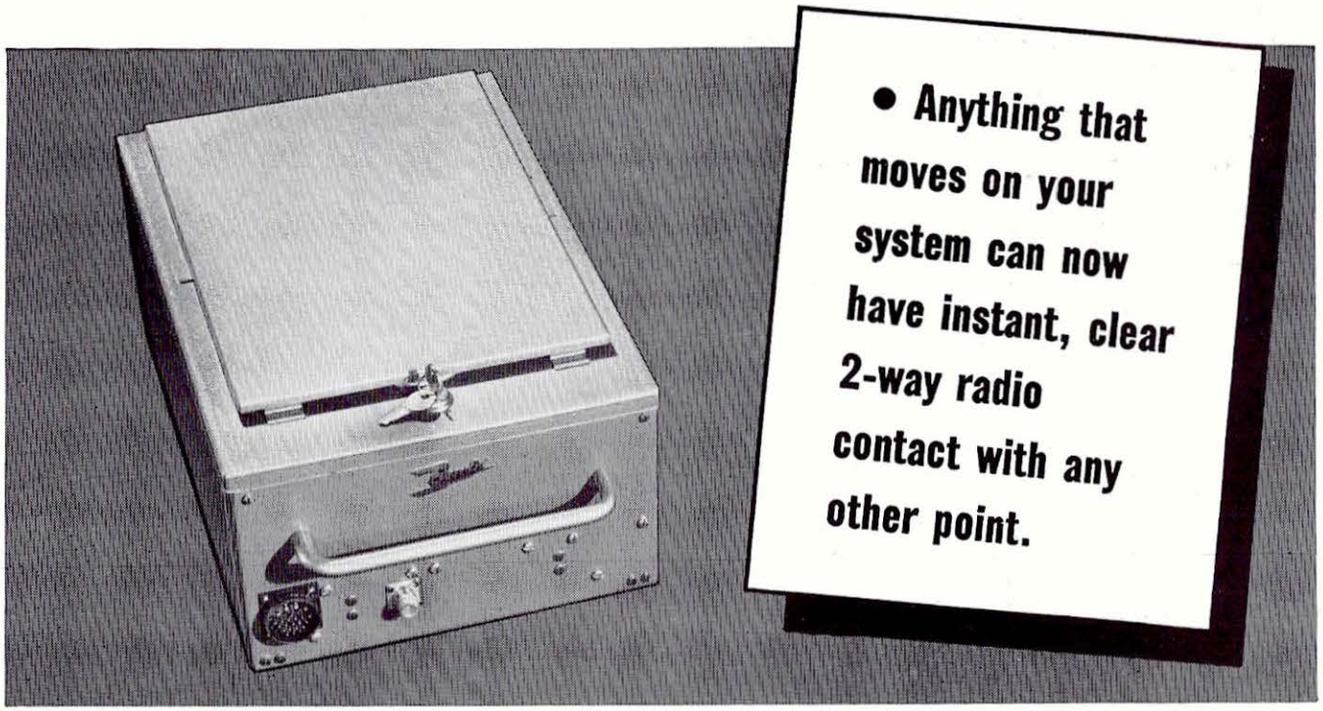
RAILWAY OFFICERS

EXECUTIVE

Pierre Dumaine has been appointed president of the NEW ENGLAND TRANSPORTATION COMPANY, highway subsidiary of the NEW YORK, NEW HAVEN & HARTFORD, at Boston, succeeding **Howard F. Fritch,** who died on October 17. Mr. Dumaine was for many years associated with the Waltham Watch Company and the Amoskeag Company.

(*Continued on page* 63)

Railroad Communications for vehicles too!



Bendix now brings you the final link in railroad communications . . . the new, efficient and longer lifed Bendix Trafficmaster.

It means instant contact, clear as home radio, all the way. Yard office, yard masters, supervisors, maintenance men . . . from hump operations to cross city transfer vehicles. Complete control of all movement is in the hands of one central point.

SAVES TIME AND MONEY

It's easy to see how this 2-way radio contact can eliminate loss time, prevent duplication, get the utmost efficiency out of an 8-hour shift and speed up railroad service for shippers. Think about it for a second and you'll want all the details.

BUILT TO LAST

Here in one single package is the kind of mobile equipment you've been looking for. The Bendix TRAFFICMASTER is built for long hard service . . . Selenium stacks for instance, completely eliminate rectifier tube failure . . . and all component parts have been designed to operate at internal temperatures up to 100 degrees Centrigrade . . . Only equipment like this can give you railroad performance for vehicular use.

FITS INTO PRESENT SYSTEM

You can integrate this powerful Bendix unit into any system you may be using. Built to AAR specifications and available with 6, 12, 24, 32 and 64 volts DC—117 and 234 AC power supplies. No expensive replacements. No converters. No obsolescence. Write today for further details. No obligation.

Division of
Bendix Aviation Corporation
Baltimore 4, Maryland

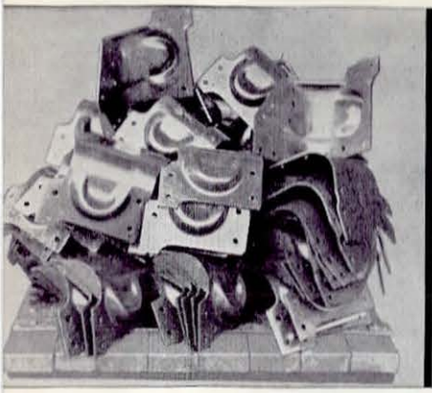
Bendix AVIATION CORPORATION

Bendix RAILROAD Radio

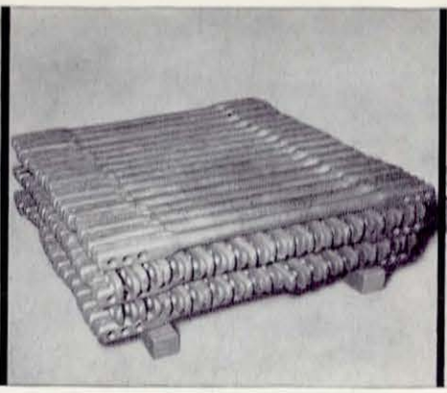
Export Sales: BENDIX INTERNATIONAL DIVISION, 72 Fifth Avenue, New York 11, New York

Canadian Distributor: RADIO ENGINEERING PRODUCTS, LTD., 4305 Iberville Street, Montreal 34, Canada

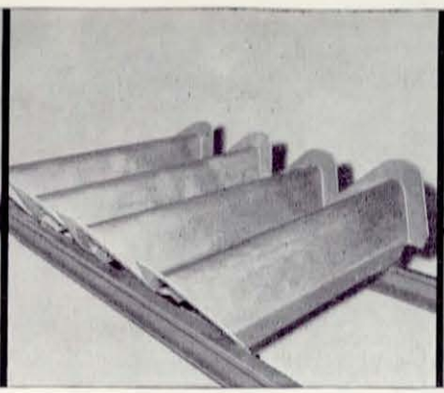
...parts and parcel to the railroad industry!



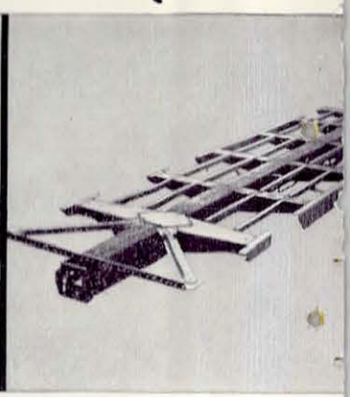
• Quantities of push-pole pockets destined for final assembly in a customer shop. Mass Production of all parts enables PSC to offer quality units at a lower cost in today's stepped-up market.



• These bottom rods are only one item produced in quantity in Pressed Steel Car's forge shops. Others include, grab irons, brackets, hooks, jaws, hinges, levers, pins and many more.



• Ready for finish and assembly are these hopper car hoods which have been through the shearing, pressing and punching operations. Another example of the facilities available for standard or custom fabrication in our press shops.



• Center sills, stringers, cross bearers and other component parts are offered separately along with the completely assembled underframe.

THE STORY OF

PRESSED STEEL CAR COMPANY'S STANDARD PARTS PROGRAM

Pressed Steel Car is proud of its standard parts program which through the years, has become a "by-word" with many of America's railroads.

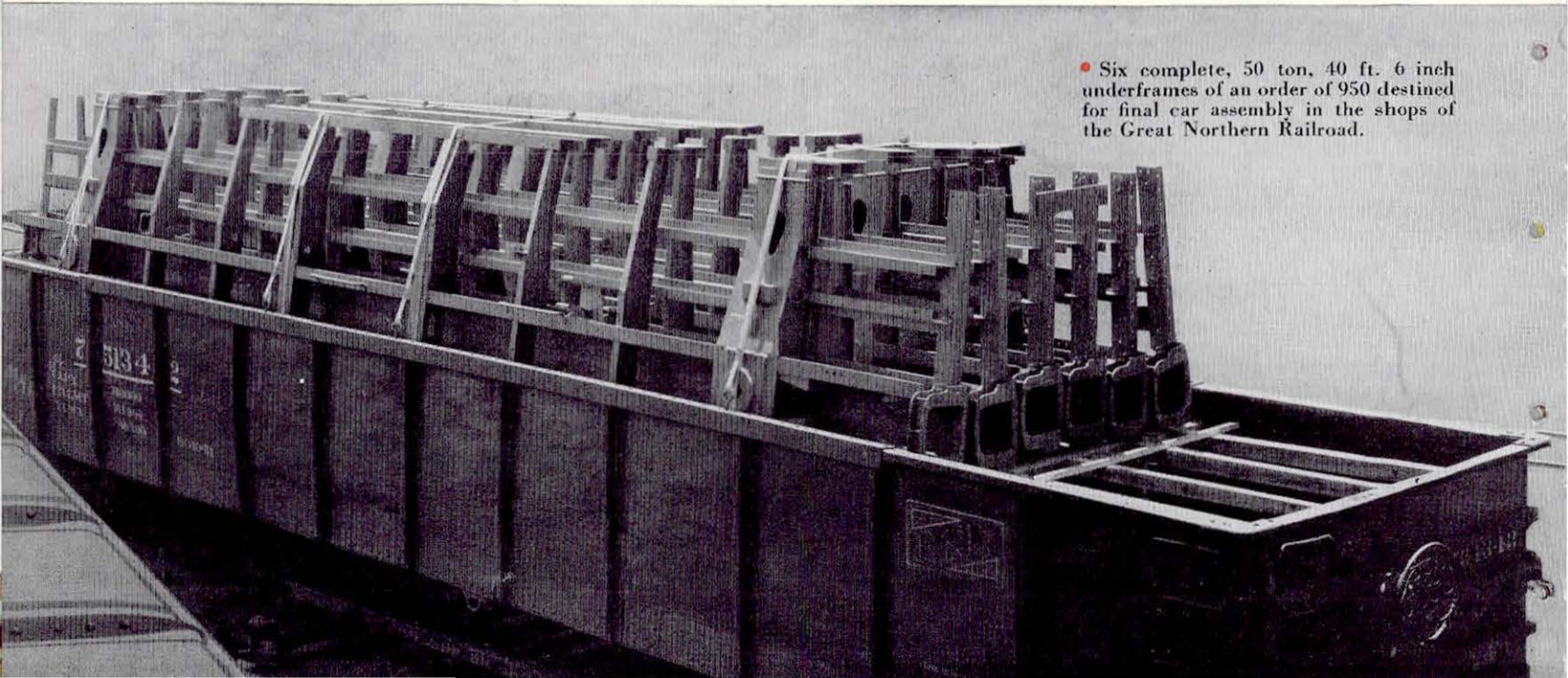
Each part, whether it be a forging, weldment, casting or pressing contributes to the overall strength, economy and efficiency of today's freight car. Engineering and metallurgical know-how are behind P.S.C's desire to supply the finest parts available from the smallest pin to complete underframes.

If your needs call for standard maintenance parts or complete car assembly in your shop we suggest that you inquire about PSC's program of supplying these parts more economically. Save time and money by writing today for further information on Pressed Steel Car Company's full production facilities.

PRESSED STEEL CAR COMPANY, INC.

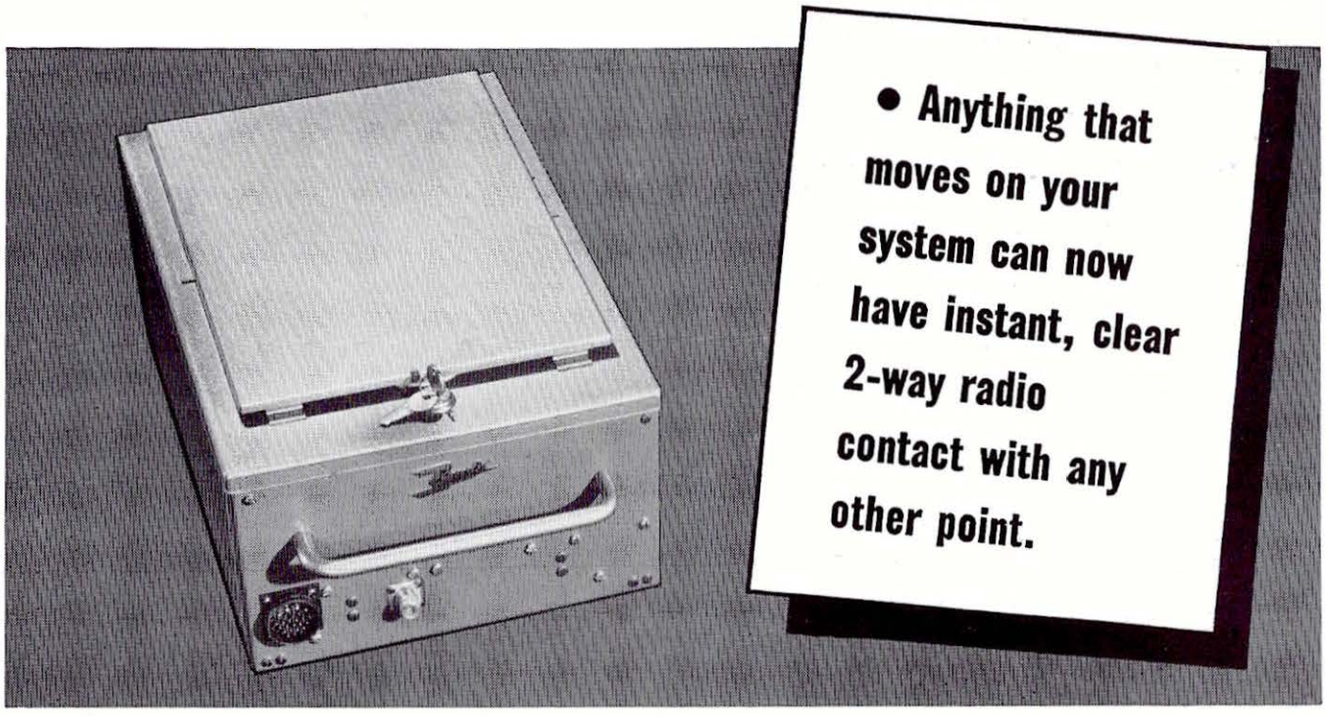
6 North Michigan Avenue • Chicago, Illinois

PSC



• Six complete, 50 ton, 40 ft. 6 inch underframes of an order of 950 destined for final car assembly in the shops of the Great Northern Railroad.

Railroad Communications for vehicles too!



Bendix now brings you the final link in railroad communications . . . the new, efficient and longer lifed Bendix Trafficmaster.

It means instant contact, clear as home radio, all the way. Yard office, yard masters, supervisors, maintenance men . . . from hump operations to cross city transfer vehicles. Complete control of all movement is in the hands of one central point.

SAVES TIME AND MONEY

It's easy to see how this 2-way radio contact can eliminate loss time, prevent duplication, get the utmost efficiency out of an 8-hour shift and speed up railroad service for shippers. Think about it for a second and you'll want all the details.

BUILT TO LAST

Here in one single package is the kind of mobile equipment you've been looking for. The Bendix TRAFFICMASTER is built for long hard service . . . Selenium stacks for instance, completely eliminate rectifier tube failure . . . and all component parts have been designed to operate at internal temperatures up to 100 degrees Centrigrade . . . Only equipment like this can give you railroad performance for vehicular use.

FITS INTO PRESENT SYSTEM

You can integrate this powerful Bendix unit into any system you may be using. Built to AAR specifications and available with 6, 12, 24, 32 and 64 volts DC—117 and 234 AC power supplies. No expensive replacements. No converters. No obsolescence. Write today for further details. No obligation.

Division of
Bendix Aviation Corporation
Baltimore 4, Maryland

Bendix AVIATION CORPORATION

Bendix RAILROAD Radio

Export Sales: BENDIX INTERNATIONAL DIVISION, 72 Fifth Avenue, New York 11, New York

Canadian Distributor: RADIO ENGINEERING PRODUCTS, LTD., 4305 Iberville Street, Montreal 34, Canada

TM

New motive power for today's symbol trains

Combine 2400 horsepower, six high-capacity
traction motors, a 3000 horsepower dynamic brake . . .
all in a single diesel locomotive
and you have the newest in railroad motive power
— the Fairbanks-Morse Train Master.

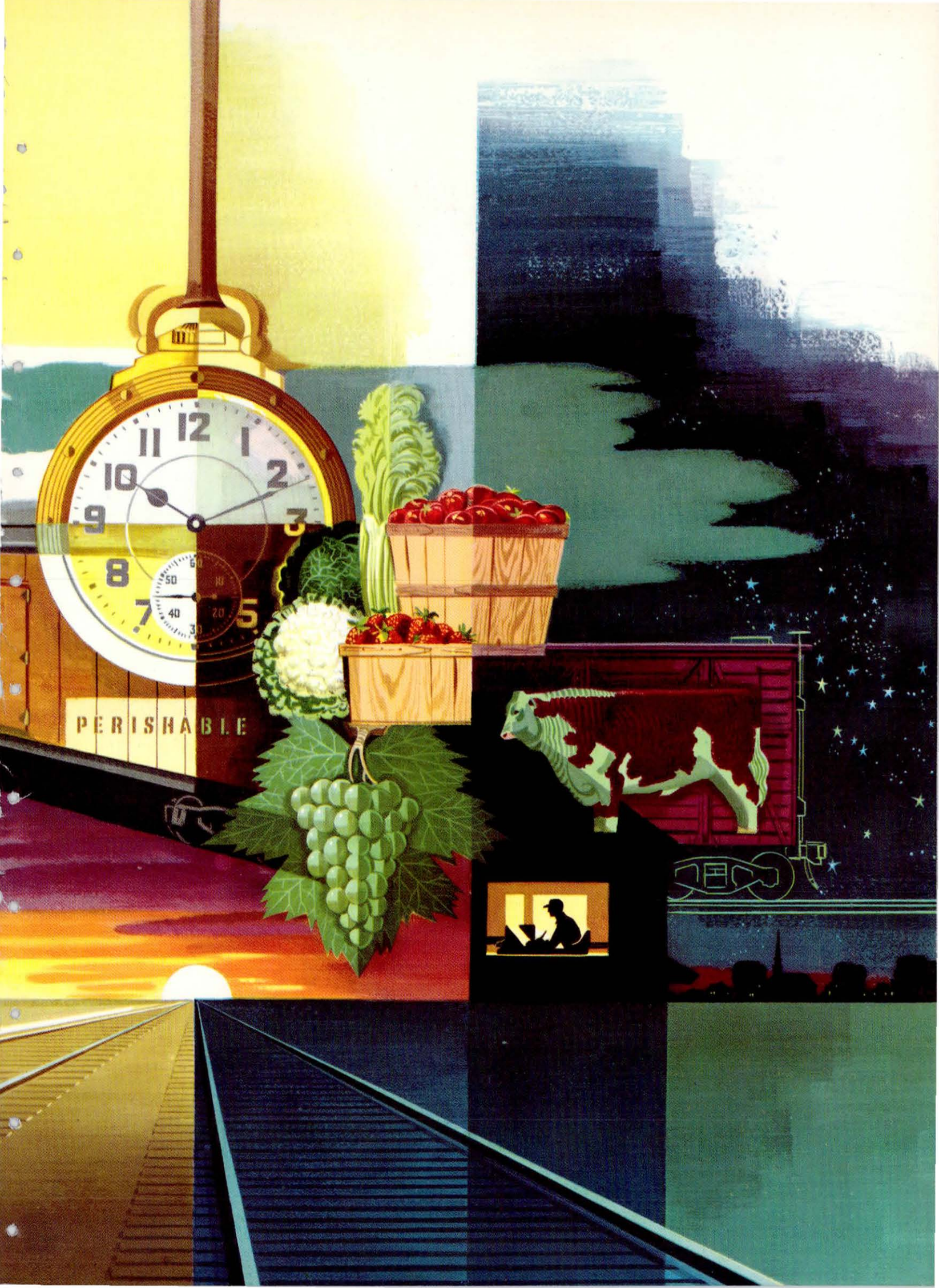
This pulling and train-handling capacity means
increased freight train performance.
The higher ton-miles per train hour
that you've planned for tomorrow's symbol trains
can be scheduled now.

Watch for the Train Master —
the newest name in railroading that brings new opportunity
for greater operating efficiency in *all* classes of service.
Fairbanks, Morse & Co., Chicago 5, Ill.

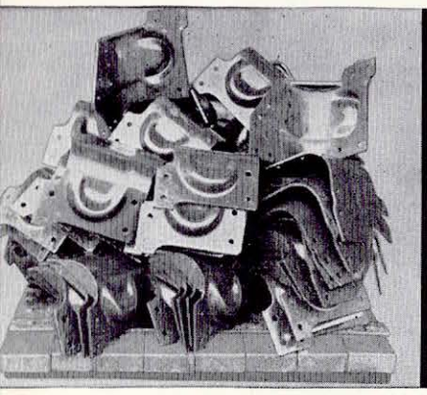
FAIRBANKS-MORSE

a name worth remembering when you want the best

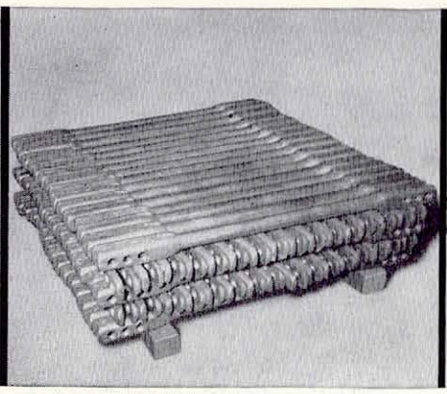
DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES
RAIL CARS • HOME WATER SERVICE EQUIPMENT • FARM MACHINERY • MAGNETOS


PERISHABLE

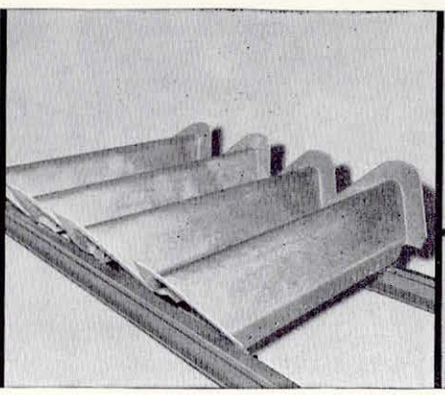
...parts and parcel to the railroad industry!



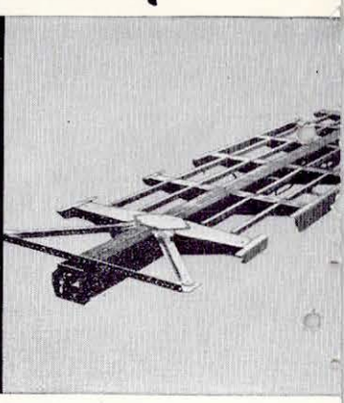
• Quantities of push-pole pockets destined for final assembly in a customer shop. Mass Production of all parts enables PSC to offer quality units at a lower cost in today's stepped-up market.



• These bottom rods are only one item produced in quantity in Pressed Steel Car's forge shops. Others include, grab irons, brackets, hooks, jaws, hinges, levers, pins and many more.



• Ready for finish and assembly are these hopper car hoods which have been through the shearing, pressing and punching operations. Another example of the facilities available for standard or custom fabrication in our press shops.



• Center sills, stringers, cross bearers and other component parts are offered separately along with the completely assembled underframe.

THE STORY OF

PRESSED STEEL CAR COMPANY'S STANDARD PARTS PROGRAM

Pressed Steel Car is proud of its standard parts program which through the years, has become a "by-word" with many of America's railroads.

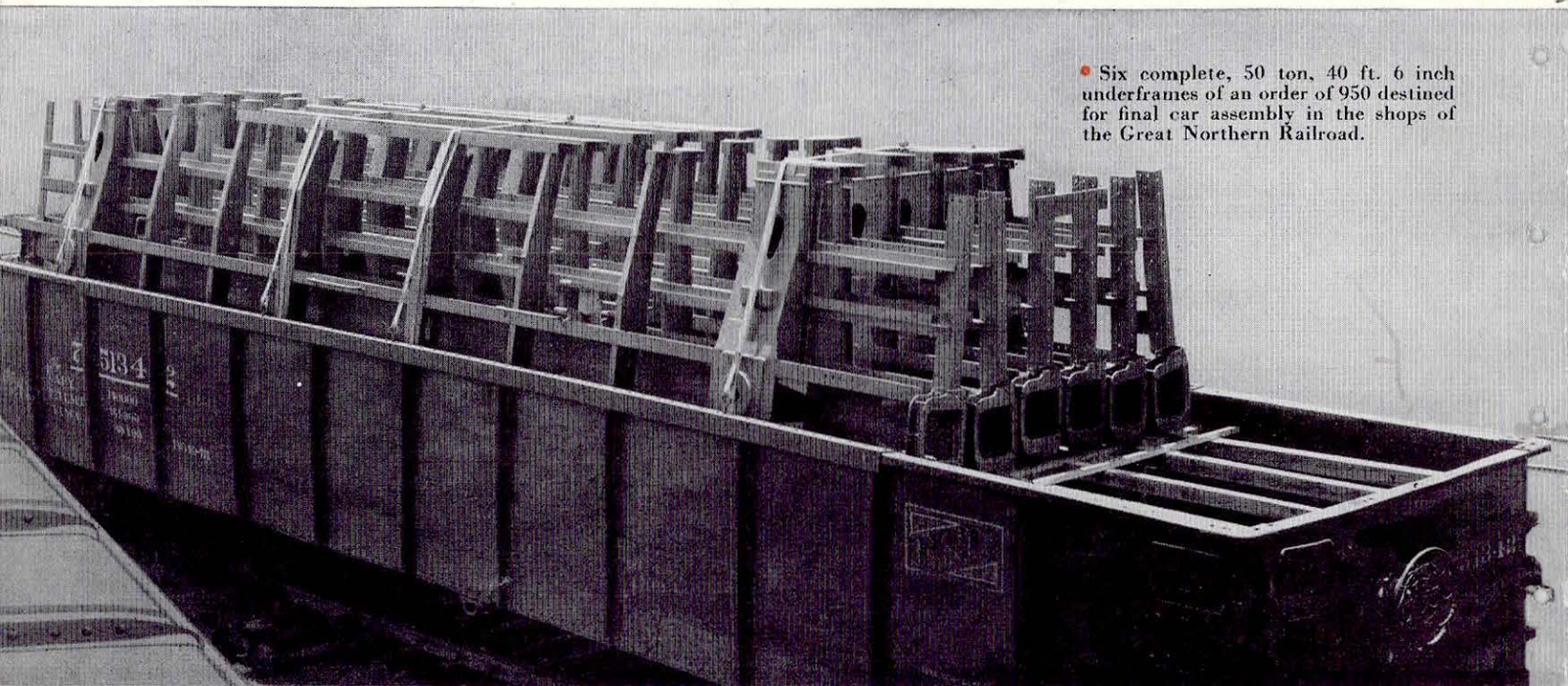
Each part, whether it be a forging, weldment, casting or pressing contributes to the overall strength, economy and efficiency of today's freight car. Engineering and metallurgical know-how are behind P.S.C's desire to supply the finest parts available from the smallest pin to complete underframes.

If your needs call for standard maintenance parts or complete car assembly in your shop we suggest that you inquire about PSC's program of supplying these parts more economically. Save time and money by writing today for further information on Pressed Steel Car Company's full production facilities.

PRESSED STEEL CAR COMPANY, INC.

6 North Michigan Avenue • Chicago, Illinois

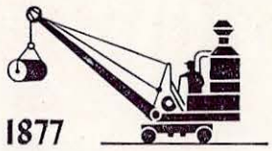
PSC



• Six complete, 50 ton, 40 ft. 6 inch underframes of an order of 950 destined for final car assembly in the shops of the Great Northern Railroad.

BROWNHOIST
finest, most modern CRANE . . . the result of 75 years of progressive engineering

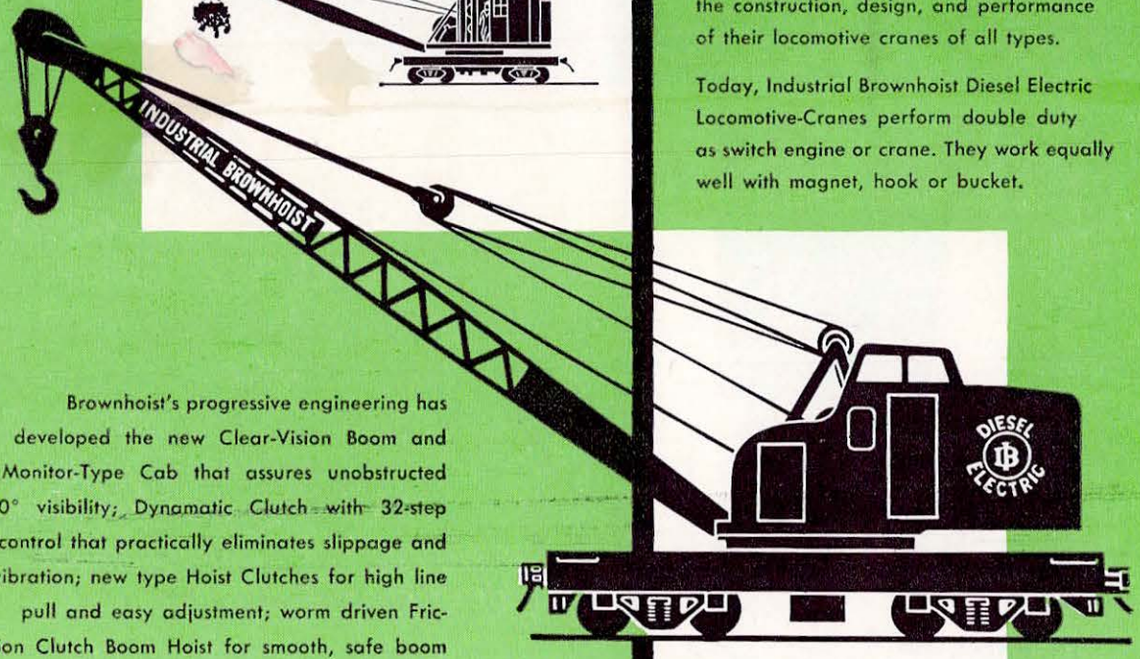
1877



1927

Even in 1877 the first little coal-fired Brownhoist cranes were known as the best locomotive cranes of their day. Every year since, Brownhoist engineering has constantly improved the construction, design, and performance of their locomotive cranes of all types.

Today, Industrial Brownhoist Diesel Electric Locomotive-Cranes perform double duty as switch engine or crane. They work equally well with magnet, hook or bucket.



Brownhoist's progressive engineering has developed the new Clear-Vision Boom and Monitor-Type Cab that assures unobstructed 360° visibility; Dynamatic Clutch with 32-step control that practically eliminates slippage and vibration; new type Hoist Clutches for high line pull and easy adjustment; worm driven Friction Clutch Boom Hoist for smooth, safe boom operation. Optional features on Brownhoist cranes today include Dual Controls, 8-Wheel Chain Drive for increased drawbar pull, Twin Engine Drive for greater traction and Timken Roller Bearing Journals. Brownhoist Diesel-Electric Locomotive Cranes are available in capacities from 30 to 80 tons.

1952

BROWNHOIST builds better cranes

CLAMSHELL BUCKET

250 TON WRECKING CRANE

COAL-ORE BRIDGE

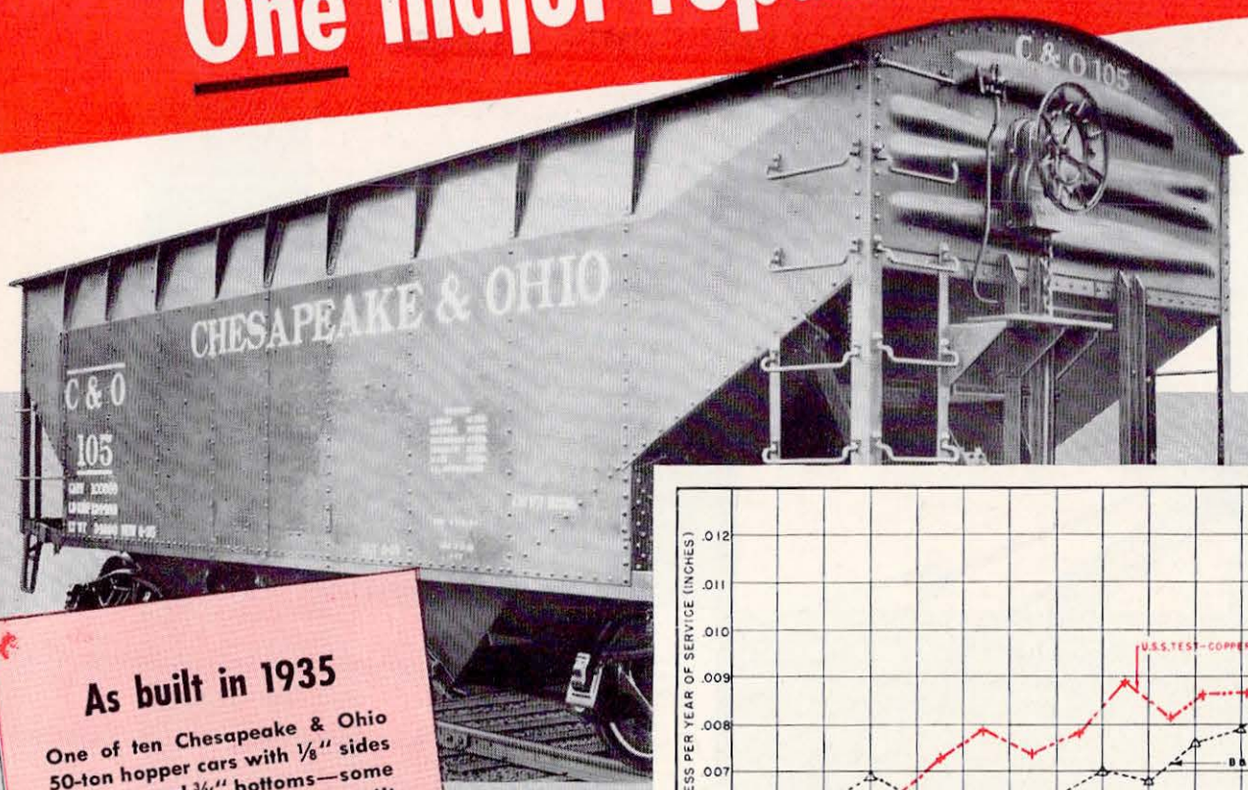
CAR DUMPER

INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, MICHIGAN • **DISTRICT OFFICES:** New York, Philadelphia, Cleveland, San Francisco, Chicago, Canadian Brownhoist, Ltd., Montreal, Quebec • **AGENCIES:** Detroit, Birmingham, Houston, Los Angeles

154

Who says hopper cars must be rebuilt every 12 years?

One major repair instead of two

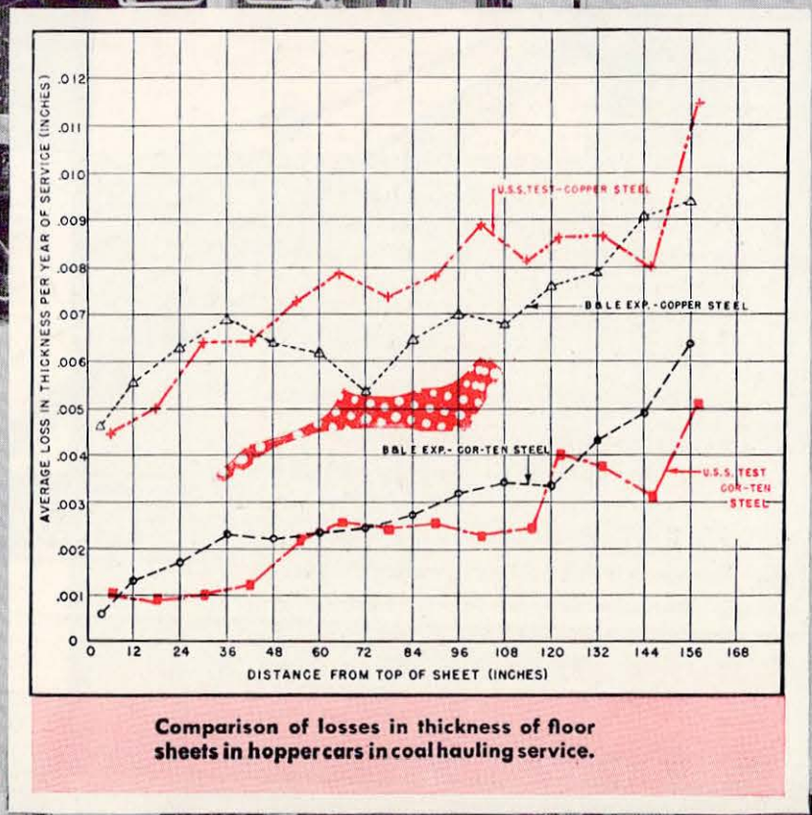


As built in 1935

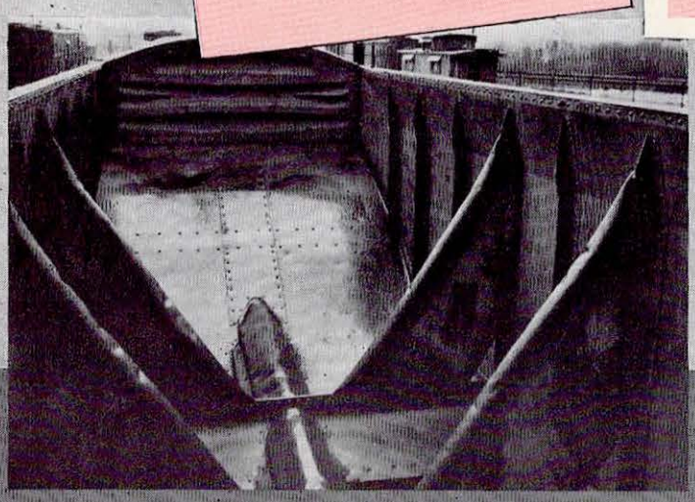
One of ten Chesapeake & Ohio 50-ton hopper cars with 1/8" sides and ends and 3/16" bottoms—some of the earliest equipment built with U·S·S COR-TEN steel. Weight only 34,800 lb.

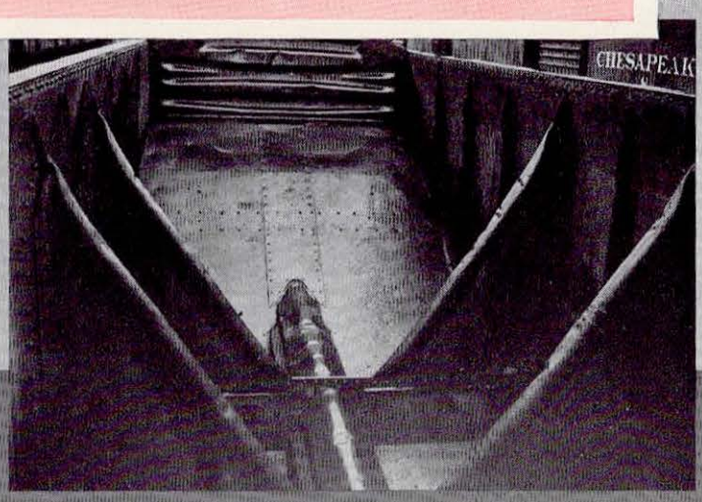
14 years later

Photographs at time of inspection in 1949 show A and B ends of car. Note the relatively good condition of the extremely light COR-TEN steel sheets after 14 years' service.



Comparison of losses in thickness of floor sheets in hopper cars in coal hauling service.





when cars are built of COR-TEN steel

Read why you can confidently expect at least 50% longer service from hopper cars built of corrosion-resisting U·S·S COR-TEN steel.

IN hopper cars, corrosion is most to blame for cars wearing out. Damage due to corrosion is the main factor that makes major repairs necessary. Today, 64% of the money spent for hopper car repairs is spent to replace parts damaged by corrosion.

The proper use of corrosion-resisting U·S·S Cor-Ten steel can change all this—can extend the time between shoppings 50% or more and can reduce the cost of major repairs by a third or more under normal general service conditions.

These are facts. After 13½ years of actual service tests, the results prove that in general when used in the same thicknesses as copper steel, U·S·S Cor-Ten steel offers almost *twice* as much resistance to deterioration.

Results were obtained in two ways, namely, by the comparative measurement of (1) loss of weight, and (2) loss of thickness, in hopper car sheets after years of service.

"Identical-service" tests prove COR-TEN steel's superiority

Tests* of hopper cars were conducted on different lots of cars by United States Steel Company, and by the Bessemer & Lake Erie Railroad. In both instances the weight loss of copper steel parts was generally double the loss of weight of similar parts of U·S·S Cor-Ten steel in opposite ends of the *same* car.

To determine the loss of thickness at definite locations in these car bodies, all sheets were carefully measured, first, when the cars were built and, later, when parts were removed after 11 to 13½ years' service. In the floor sheets, where maximum loss of thickness in the body occurs, the loss in thickness in copper steel was *two-thirds more* than in the Cor-Ten steel sheets. (The data from these tests on U·S·S Company cars and on B & LE cars are clearly shown in the chart on the opposite page.)

Thorough-going tests like these, and comparisons of service life on other railroads, indicate that in hopper cars the life expectancy of U·S·S Cor-Ten steel body sheets is 67% to 100% *more* than copper steel of equal thickness. In other words, figuring conservatively, Cor-Ten steel can be counted upon to last at least 50% longer.

COR-TEN steel's longer life assures big savings in maintenance costs

The ability of Cor-Ten steel to reduce corrosion damage means that, during the expected life of a hopper car under normal general service conditions, Cor-Ten steel construction will require only one replacement of body sheets as against two replacements of copper steel.

The savings that result have been estimated by various railroads at from $800 to $1500 per car, depending on the type, capacity and service conditions. *Such savings average about 4 times the extra cost of Cor-Ten steel construction.*

These are the very good reasons why some of the larger users of hopper cars are increasing their use of U·S·S Cor-Ten steel both for new equipment and for repairs. Would you like to have us help you figure how much Cor-Ten steel construction could save on your railroad?

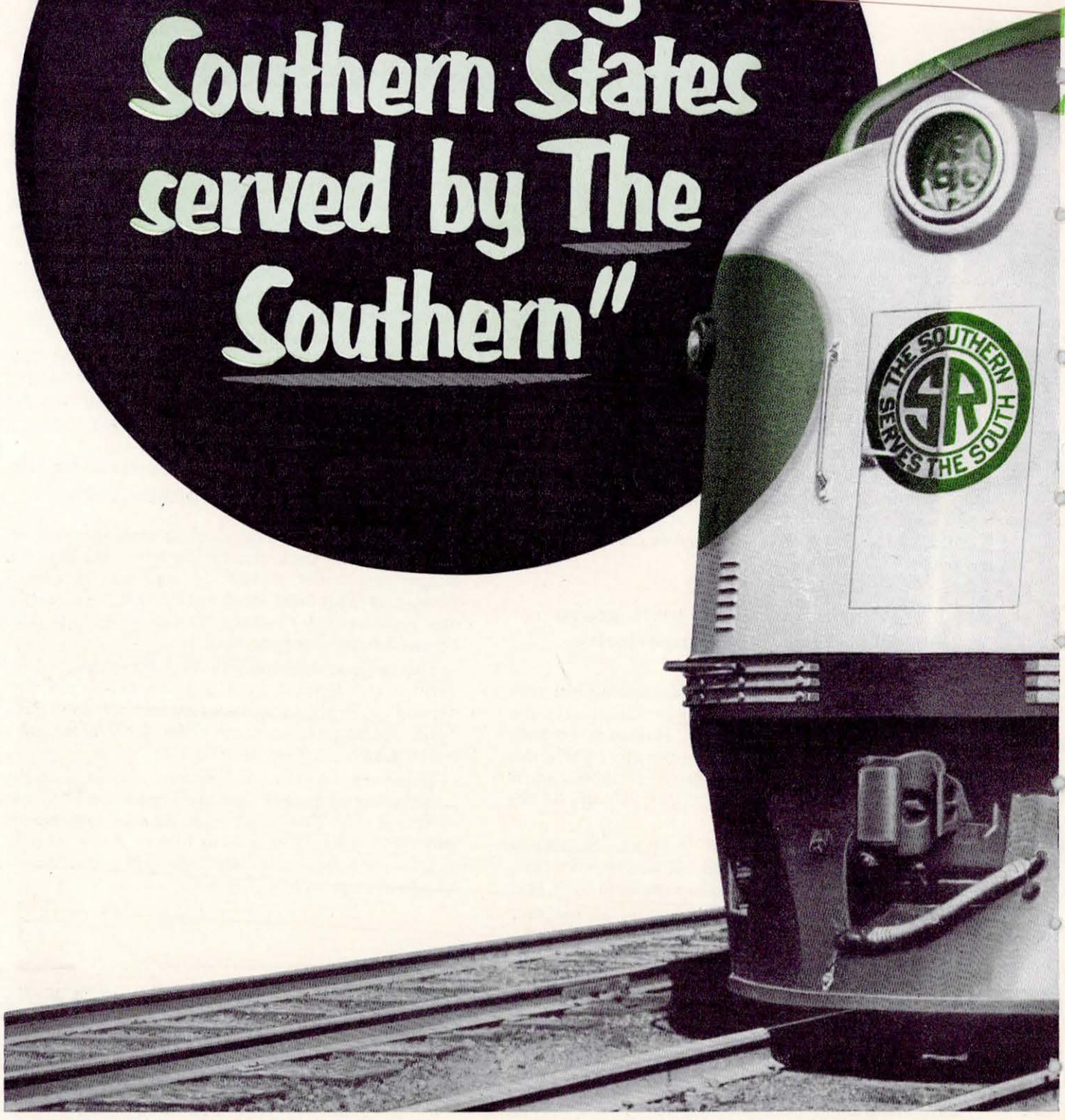
**A booklet containing complete information regarding these tests will be sent upon request.*

UNITED STATES STEEL COMPANY, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO • NATIONAL TUBE DIVISION, PITTSBURGH
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

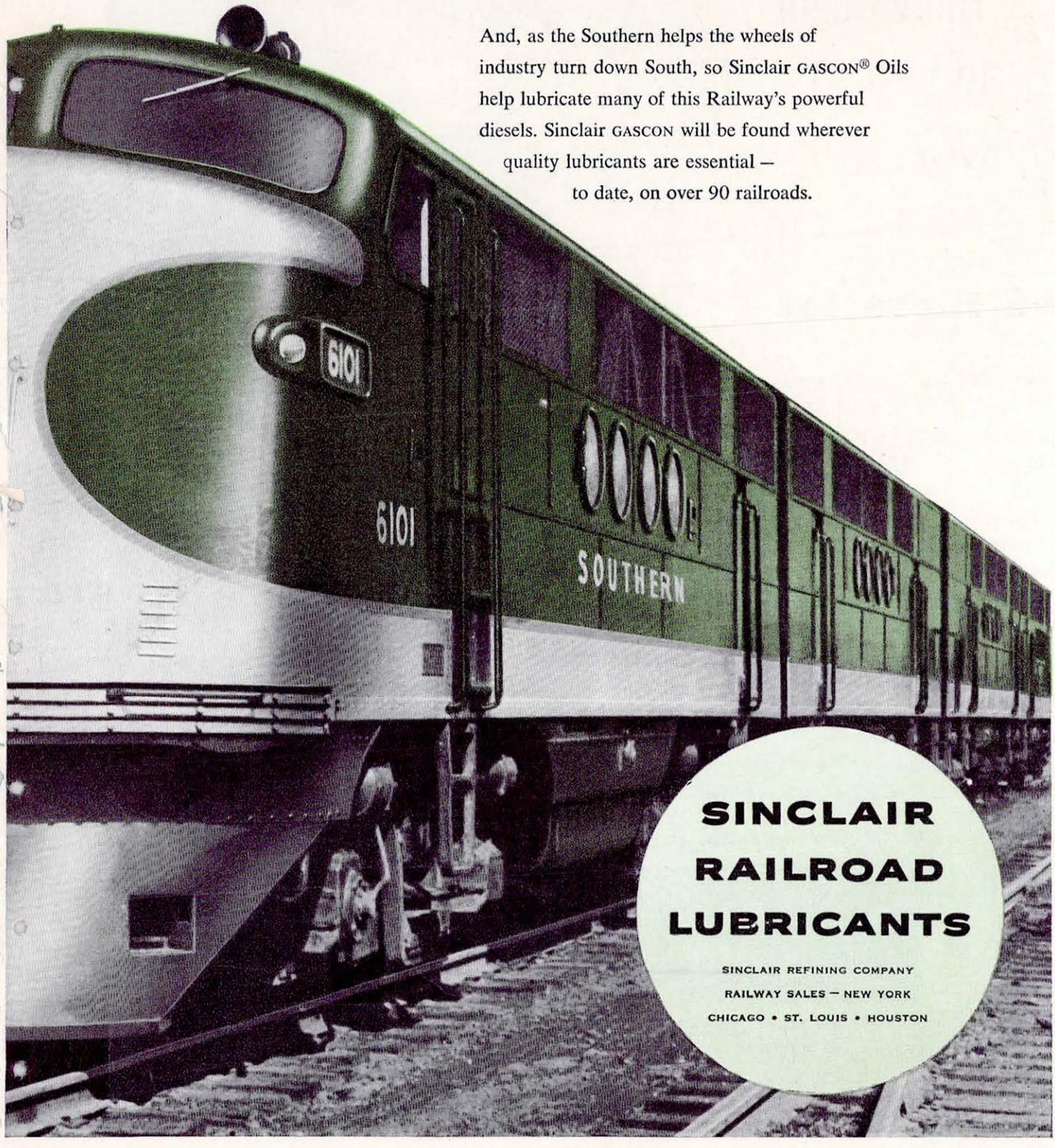
USS TRADE MARKS COR-TEN STEEL UNITED STATES STEEL

UNITED STATES STEEL

"13 Lucky Southern States served by The Southern"



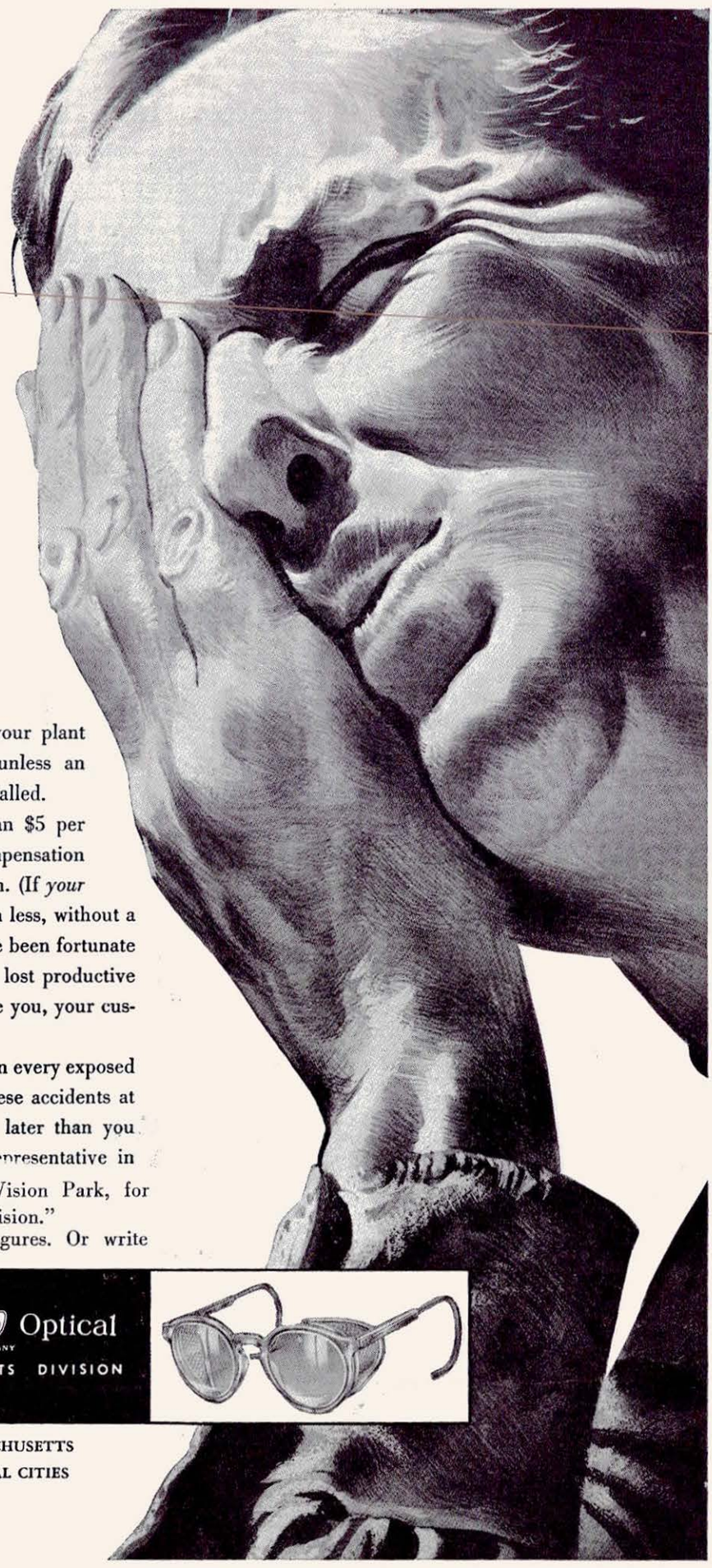
Today it's "Look ahead young man – look South." For big things are happening down Dixie way. A new "economic frontier" once again gets its spark and drive from the railways. Here, 13 lucky Southern States flex their muscles along the lines of the Southern Railway System. New industries, distribution warehouses and plant expansions are occurring at *an average of more than one each working day!* Yes, the South is opportunity land – it's growing fast. And 13 lucky Southern States owe thanks to the vigorous, modern Southern Railway System.



And, as the Southern helps the wheels of industry turn down South, so Sinclair GASCON® Oils help lubricate many of this Railway's powerful diesels. Sinclair GASCON will be found wherever quality lubricants are essential – to date, on over 90 railroads.

SINCLAIR RAILROAD LUBRICANTS

SINCLAIR REFINING COMPANY
RAILWAY SALES – NEW YORK
CHICAGO • ST. LOUIS • HOUSTON



There Ought to be a LAW...

and there IS!

Over the years eye injury costs at your plant will follow the LAW OF AVERAGES unless an adequate eye protection program is installed.

Eye injuries cost industry more than $5 per employed worker per year with compensation averaging nearly $400* per injured man. (If *your* company's eye accident costs have been less, without a formal eye protection program, you have been fortunate —*so far.*) Eye accidents also cost $5 in lost productive time every second the clock ticks—time you, your customers and the nation can ill afford.

Put a comfortable AO Safety Goggle on every exposed worker and you *can prevent* 98% of these accidents at very little cost. Act *today*—it may be later than you think. Ask the AO Safety Products Representative in your area to call with facts and figures. Or write American Optical Company, 4511 Vision Park, for free booklet "Improved Industrial Vision."

*Estimate

American Optical Company
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS
BRANCHES IN PRINCIPAL CITIES

IT'S NO ACCIDENT that

...MODEL 10 SIGNALS are PREFERRED PROTECTION ON 100 RAILROADS

IT'S NO ACCIDENT...

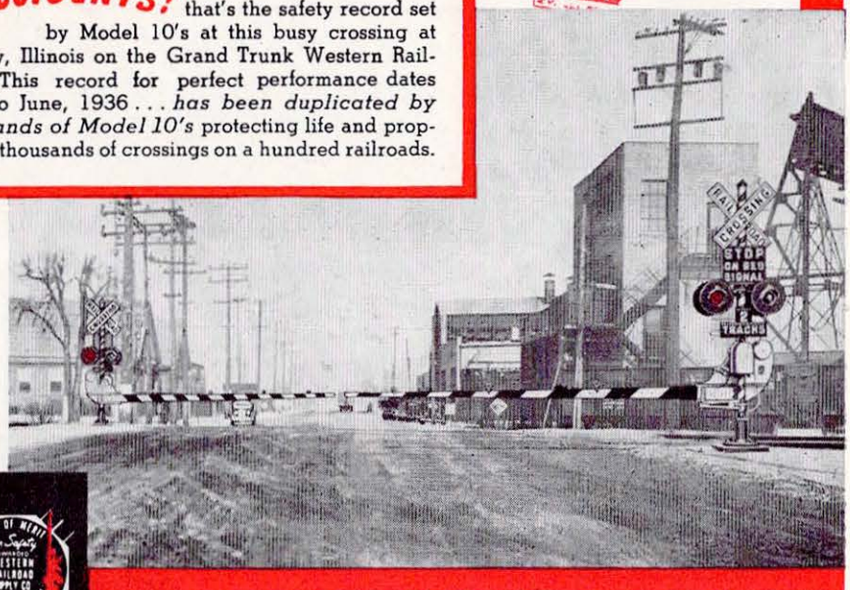
that Model 10 Automatic Signals occupy the Number One position for lifesaving protection at railroad-highway crossings. This post of honor has been *earned* by outstanding performance. NO ACCIDENT *has ever occurred as a result of operation failure on the part of Model 10's.*

IT'S NO ACCIDENT...

that Model 10's are regarded by traffic experts as today's best buy in grade crossing protection. *Engineered with half a century of experience in this specialized field,* Model 10's are built to exacting standards by modern precision methods and equipment. They offer, in addition to mechanical excellence, the sound economies of low installation cost, minimum operating cost, and virtually no maintenance or replacement of parts.

Write for "Grade Crossing Safety is Your Business." It's free. Just ask for Brochure No. 748-RA12.

NO ACCIDENTS! that's the safety record set by Model 10's at this busy crossing at Harvey, Illinois on the Grand Trunk Western Railroad. This record for perfect performance dates back to June, 1936 . . . *has been duplicated by thousands of Model 10's* protecting life and property at thousands of crossings on a hundred railroads.



Model 10

AUTOMATIC GRADE CROSSING SIGNALS
PRODUCT OF
WESTERN RAILROAD SUPPLY COMPANY
CHICAGO 8, ILLINOIS

LEADING MANUFACTURER OF GRADE CROSSING SAFETY DEVICES—MAKER OF RAILWAY SIGNALING ACCESSORIES

U. S. Pat. Nos. 2,137,196; 2,362,710, 2,372,579. Pat'd in Canada 6-27-39

guard against WHEEL

WHEEL SLIDE ... guard

AMERICAN

3 in 1

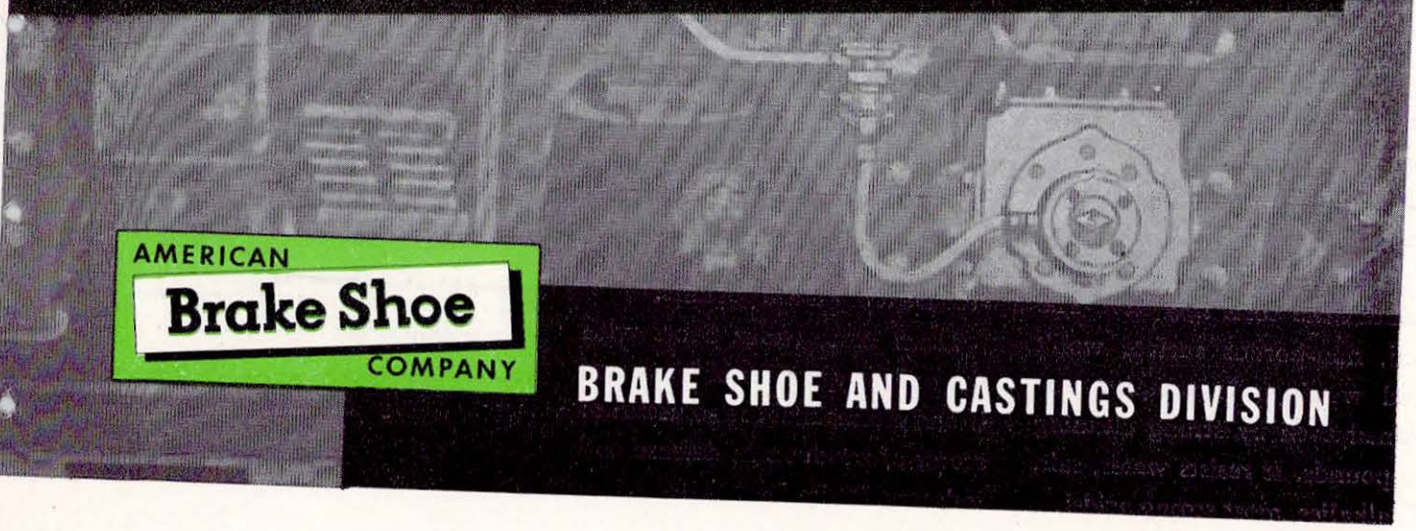
guards diesels

SPIN ... guard against

against WHEEL LOCK-UP

BRAKE SHOE CONTROLLER

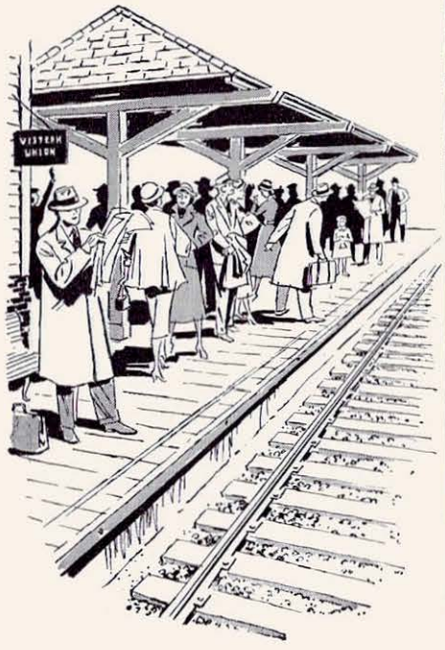
against all three



AMERICAN Brake Shoe COMPANY

BRAKE SHOE AND CASTINGS DIVISION

This floor meets the "COMMUTER TEST"



Data on "Terraflex" courtesy Johns-Manville Corp., 22 East 40th St., New York 16, N. Y.

It's a floor to cheer operators and passengers alike—built for years of service, easily cleaned, colorful and modern! It's "Terraflex," a resilient flooring that's made from VINYLITE Brand Resins.

Thousands of commuters track mud, cinders, gravel and grease, down this aisle every month. And maintenance costs *stay low!* The hard, non-porous surface won't need waxing. It remains unharmed even by strong cleaning compounds. It resists water, salt, oil, alkalies, most strong acids!

Flooring materials made from VINYLITE Brand Resins have a flexibility that prevents "lifting" caused by the working of car floors. In tile or continuous flooring, they offer a wider range of brighter, clearer, more stable colors than ever before possible in resilient flooring materials. More attractive designs are possible.

Learn more about floors with the unique qualities of VINYLITE Brand Resins that are so useful to scores of products in defense and industry. Write Dept. MD-73.

Vinylite
BRAND
RESINS
TRADE MARK
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.

The Illinois Central reports:

G-E PLATFORM LIGHTING GIVES MOST LIGHT WITH LEAST GLARE

The Illinois Central provides "main street" lighting for its passenger platforms in Chicago's Central Station by using G-E mercury-vapor street-lighting luminaires.

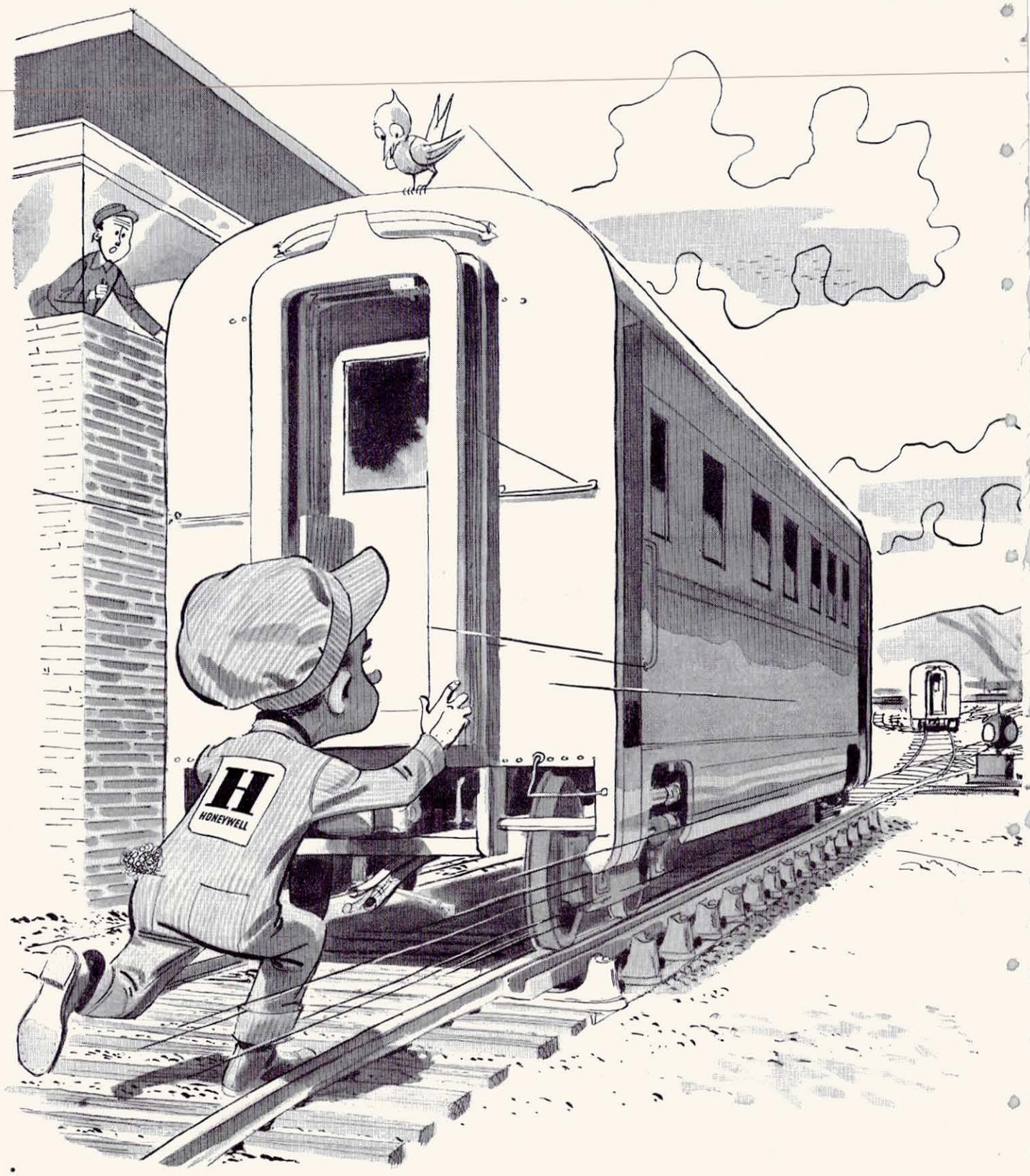
Train Master T. J. Reid reports: "This lighting is a big improvement over other types. The G-E mercury-vapor luminaires give us maximum useful light with a minimum of glare. And only one row of standards is needed to light two platforms and surrounding areas. That means minimum interference in handling baggage and mail trucks."

Ask your G-E representative to show you how General Electric's experience with all kinds of lighting can help you improve your operations. General Electric Co., Schenectady 5, N. Y. 152-32

You can put your confidence in—

GENERAL ELECTRIC

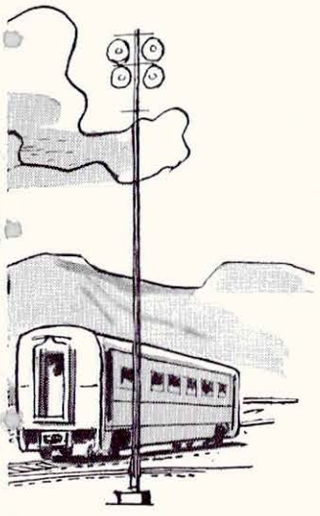
He's over



the hump!

Things have happened in the railroad car-heating field since this Honeywell youngster moved in. And everything he has helped accomplish has proved beneficial to the nation's railroads:

* *the cost of passenger car heating under competitive bidding has been substantially reduced.*
* *passenger car-heating systems have been greatly simplified, with a marked reduction in maintenance parts.*
* *steam piping has likewise been simplified, with a significant reduction in steam consumption for car heating.*



Now this Honeywell husky, mature in experience, is ready to go to work on your line, too.

Honeywell's initial contribution to the nation's railroads – back in 1944 – was in diesel engine controls. About the same time, study and research was also started on passenger car heating. Completely new equipment was designed and given exhaustive factory checks, and intensive field testing. Now, over 5 years of carefully planned development and cooperation with railroads is responsible for the remarkable performance records of the Honeywell systems now in service.

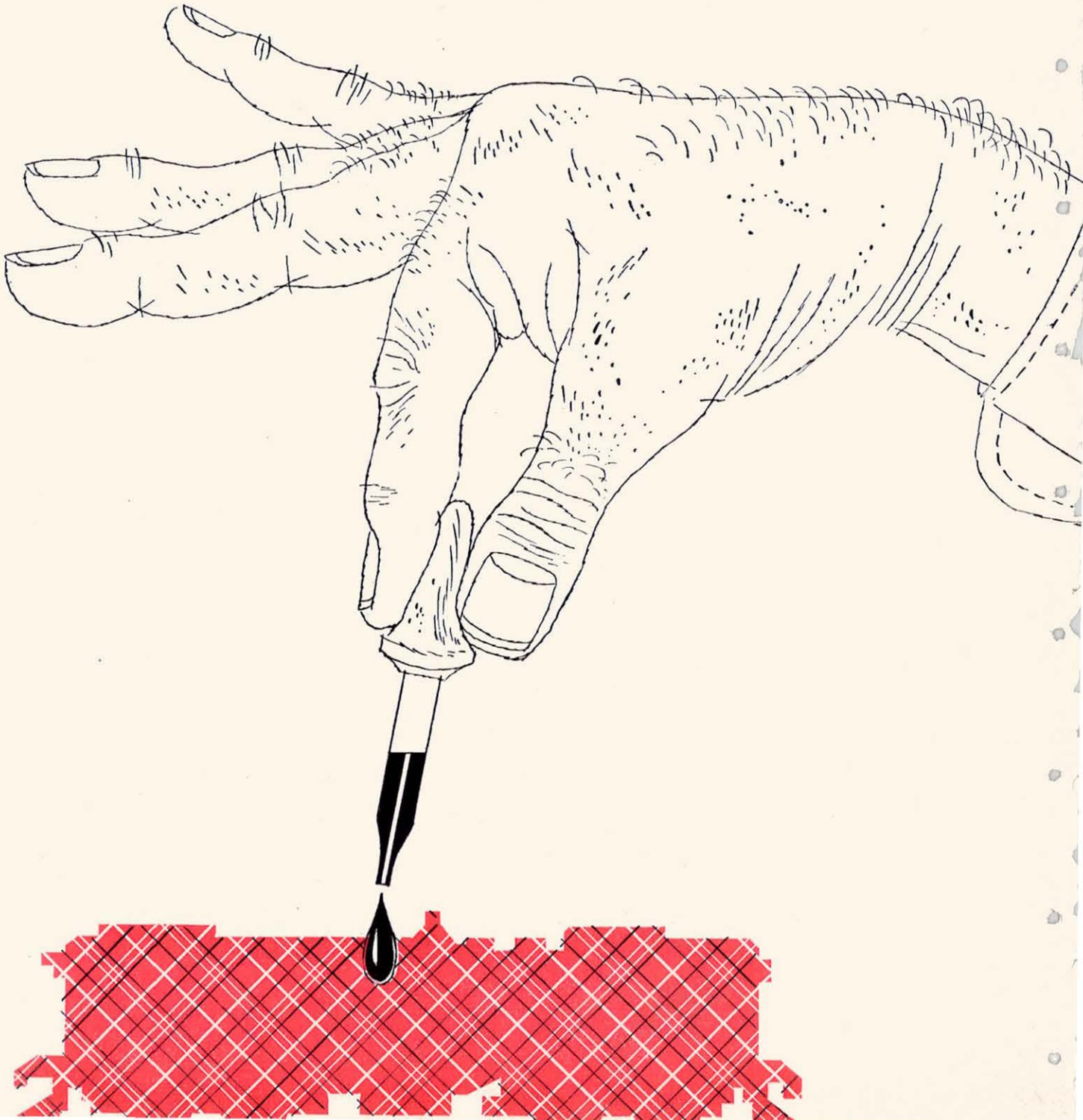
Honeywell – in addition to outstanding manufacturing facilities – offers valuable technical advice and the service of experienced control engineers from its network of 104 branch offices located in key cities from coast to coast. On your next car-heating job—call Honeywell – and take advantage of their long experience in the heating control field.

MINNEAPOLIS
Honeywell

H HONEYWELL Transportation Division

Today, Honeywell Moduflow Car-Heating Systems are proving themselves in use on the cars of twenty different railroads across the nation.

LESS LUBE OIL



with thrifty Baldwins

In 437,253 miles of operation last year, one railroad* writes us that their fleet of thrifty Baldwins used only .0135 gallons of lube oil per unit mile.

Think what savings like that will mean on *your* railroad when you *buy* a *Baldwin.*

* The facts in this advertisement have been verified by this railroad . . . we'll gladly supply the name of the road if you write us on your company letterhead.

BALDWIN-LIMA-HAMILTON CORPORATION

Philadelphia 42, Pa. • Offices in Principal Cities

BALDWIN-Westinghouse

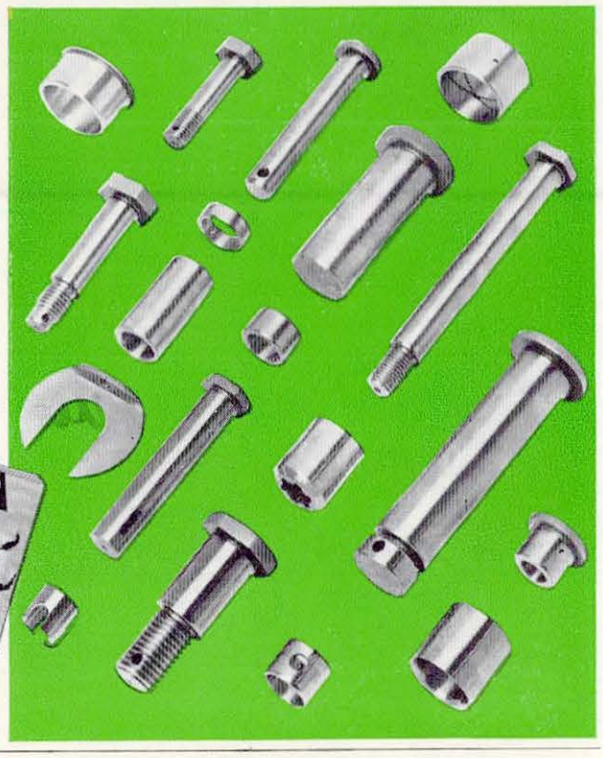
DIESEL-ELECTRIC LOCOMOTIVES

...they're thrifty!

A MILLION MILES

Between Shoppings with EX-CELL-O Pins and Bushings

The longer wear from Ex-Cell-O hardened and ground steel pins and bushings means trouble-free service for your equipment — often over a million miles between shoppings. That's why more than 200 American railroads and equipment builders use Ex-Cell-O pins and bushings. Get long-run economy for your Diesel, steam, and passenger car equipment by standardizing now on Ex-Cell-O railroad pins and bushings.



For a complete listing of standard styles and sizes write today for new Ex-Cell-O Bulletin 32428.

RAILROAD DIVISION

EX-CELL-O CORPORATION

DETROIT 32, MICHIGAN

52-28

UNEQUALLED

. . . FOR MAKING LASTING SPLICES

. . . users who KNOW buy only the BEST

Ask for them by name...

OKONITE and MANSON tapes

Lewis **sealtite car bolt**

Cross section of head, from above, showing fins, bevel and shank. Bolt available with Loktite Nut #2 (shown) or std. square and hexagon nuts.

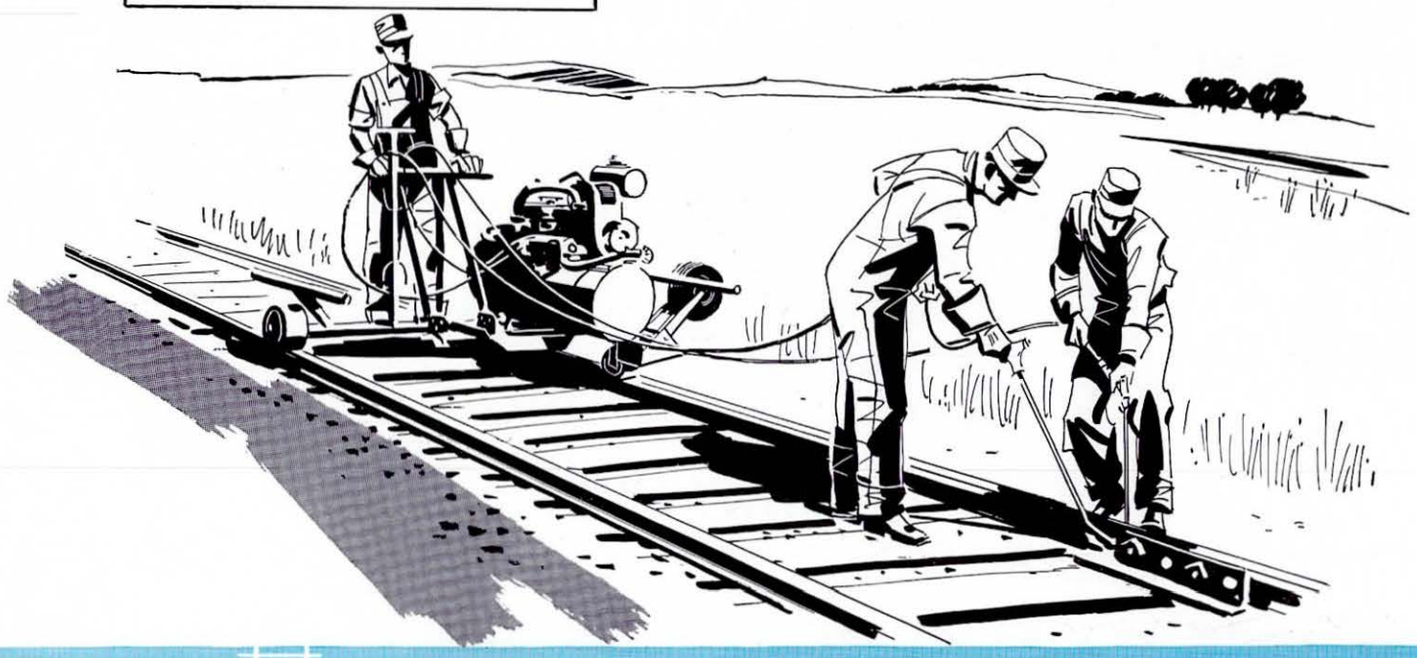
Engineered for sheathing, flooring and fastening all wood parts. Permits smooth, flush surface construction. Sealtite fins prevent turning. Beveled edge forms water-tight seal, eliminates counter boring. *Available in Hot-Dip Galvanized finish for added life and economy.*

See your Lewis representative, or contact factory for samples, prices, full details.

Lewis **BOLT & NUT COMPANY**
504 Malcolm Ave. S. E.
MINNEAPOLIS 14, MINNESOTA

LOOK FOR THIS STAMP OF U QUALITY

Fairmont RAILWAY MOTOR CARS AND WORK EQUIPMENT



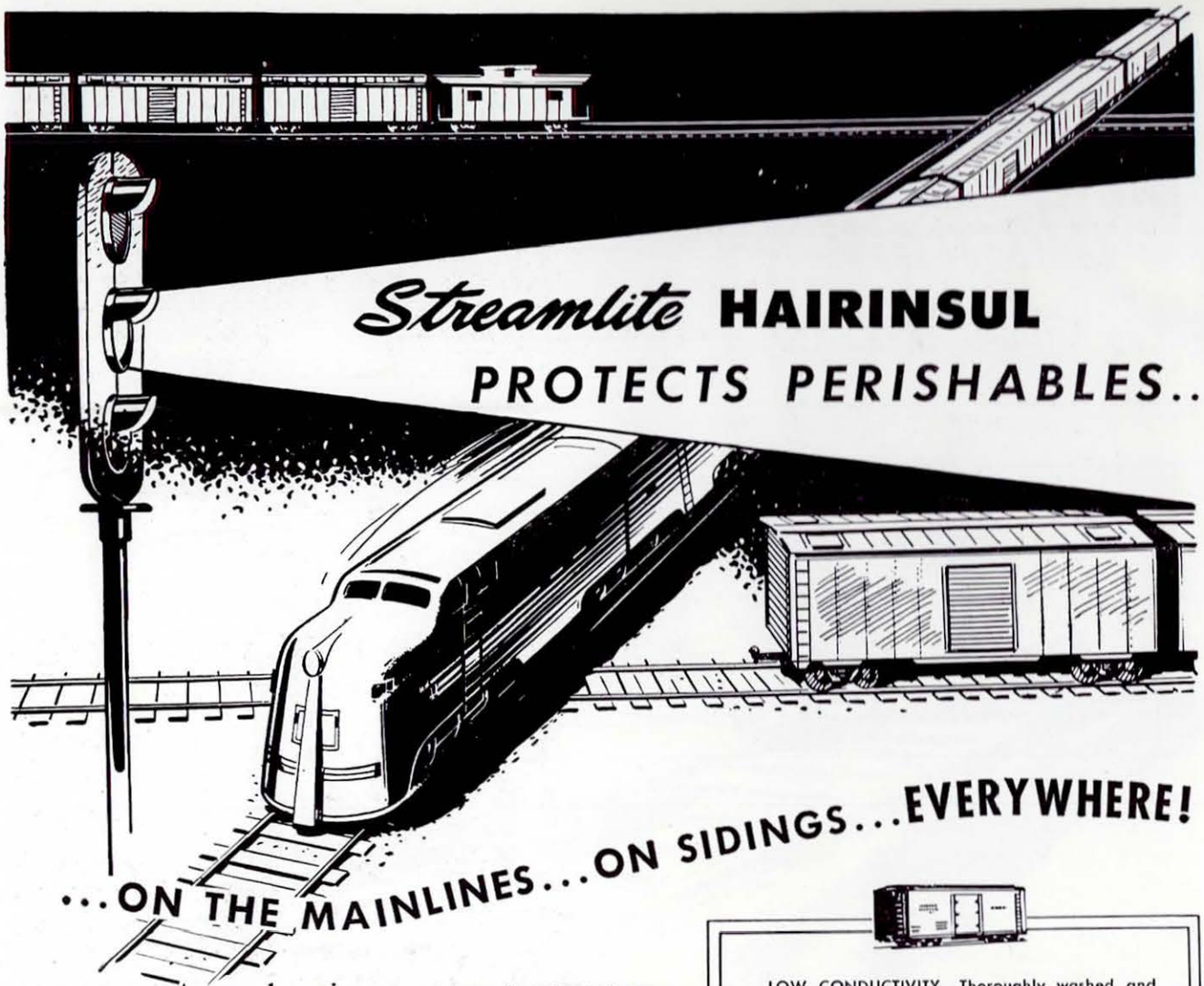
In the Service of Better Maintenance for almost 50 Years

The monumental strides which railway transportation has made since the turn of the century have called for constant improvement in the methods and techniques of railway maintenance. Fairmont has devoted itself exclusively to this cause for almost fifty years—and out of Fairmont research and Fairmont engineering have come many of today's foremost achievements in the maintenance field. Consider, for example, the Fairmont W72 Series A Oil Sprayer. This extraordinary unit is a premier example of efficiency, thoroughness and dependability on the job. Requiring only three men for operation, the W72 Series A Oil Sprayer lubricates rail joints thoroughly and is a sure means of reducing joint maintenance. It sprays clean heated oil by pressure to both sides of angle bars and switches to give complete coverage to these vital parts. Because it is light in weight and is equipped with pneumatic set-off wheels, it can be removed from the track quickly and easily. In its design, in its construction and in its operation, the W72 Series A Oil Sprayer is convincing proof that Fairmont *builds* better to *perform* better!

FAIRMONT RAILWAY MOTORS, INC., FAIRMONT, MINNESOTA

MANUFACTURERS OF INSPECTION CARS, SECTION AND GANG CARS, HY-RAIL CARS, MOTOR CAR ENGINES, PUSH CARS AND TRAILERS, WHEELS, AXLES AND BEARINGS, MOWERS, BALLAST MAINTENANCE CARS, WEED BURNERS AND EXTINGUISHER CARS, DERRICK CARS, OIL SPRAY CARS, GROUTING OUTFITS, WEED SPRAY CARS, TIE SPRAYERS, TIE REMOVERS, TIE INSERTERS

Performance ON THE JOB COUNTS



Streamlite HAIRINSUL
PROTECTS PERISHABLES...
...ON THE MAINLINES...ON SIDINGS...EVERYWHERE!

At any location . . . at any temperature Streamlite HAIRINSUL provides maximum protection to valuable shipments of perishables.

Major refrigerator car builders have been using all-hair insulation for nearly half a century—and today they specify Streamlite HAIRINSUL because of its 40% less weight, higher efficiency and greater economy.

Yes, Streamlite HAIRINSUL assures you all the major advantages listed at the right—and more besides. Write for complete data.

LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

Sets The Standard By Which All Other Refrigerator Car Insulations Are Judged

Dept. H-212, Merchandise Mart, Chicago 54, Ill.

Railroads, too, can get "into the act" with N·S·F

NAILABLE STEEL FLOORING

" . . . In the handling, storing, packaging and transporting of materials . . . we have a new and challenging field—a whole new concept of manufacturing methods, with *the greatest potential for industrial progress since mass production—the idea of mechanizing materials handling* . . . There has been a great deal of improvement, over the last five years, in all types of materials handling equipment . . . and we expect everyone who has to do with handling to *get into the act.*"

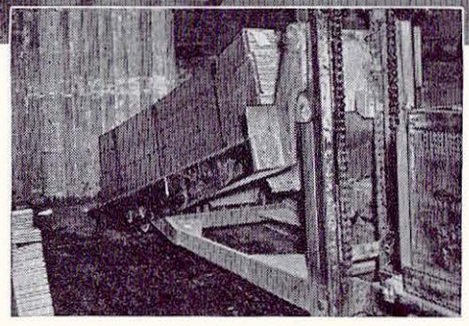
—D. S. Harder, Vice President
Ford Motor Company
before Materials Handling Conference,
Detroit, October, 1951

Now railroads can actually improve their own operations and help shippers take advantage of new materials handling methods too!

Yes—by installing NAILABLE STEEL FLOORING in boxcars and gondolas.

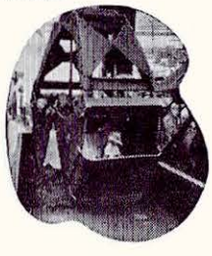
NAILABLE STEEL FLOORING carries every kind of *load*—blocked, skidded, bulk, etc., with maximum security. It withstands the concentrated weight of lift trucks, the impact and shock of other methods of loading. Formed of tough N-A-X HIGH-TENSILE steel, N-S-F increases structural strengh of cars and cuts down maintenance costs.

IN BOXCARS



For finished freight . . . as well as base materials

IN GONDOLAS



For skidded loads and blocked loads . . . or mechanical handling devices

Sales Representatives in Chicago, Philadelphia, St. Louis, Atlanta, Omaha, Denver, San Francisco, Montreal and New York.

52-SF-10
N·S·F for NAILABLE STEEL FLOORING
SAFER-STRONGER
PATENTS PENDING

GREAT LAKES STEEL CORPORATION
STEEL FLOOR DIVISION
Ecorse, Detroit 29, Michigan

PRODUCER OF N-A-X HIGH-TENSILE STEEL

NATIONAL STEEL CORPORATION

For thermal efficiency, and crew safety...

wrap steam and hot water pipes with THERMO-TAPE

the flexible asbestos tape with the waterseal lap

THIS IMPROVED tape insulation was especially developed by Johns-Manville for wrapping steam and hot water pipes on locomotives and cars. It provides a complete efficient protection on piping where curves are sharp or clearances are cramped, and where the usual sectional insulation cannot be employed. In addition, it forms a safeguard against accidental metal burns to operating and maintenance crews.

Made of an asbestos insulating pad completely enclosed within an asbestos cloth jacket, it is easy to apply and makes a neat-finished job. It is flameproof, and has a Neoprene coating that weatherproofs the portion of the tape that is exposed.

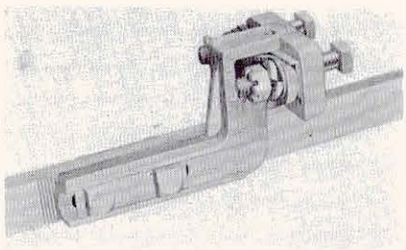
An outstanding design feature of Thermo-Tape is the generous selvage lap that is provided for the protection of the joint between turns. This lap not only helps provide a smooth application, but it forms an especially effective seal against moisture, rain and sleet.

Thermo-Tape insulation is available in four standard sizes: $2\frac{3}{8}''x\frac{3}{8}''$, $2''x\frac{1}{4}''$, $1\frac{9}{16}''x\frac{3}{16}''$ and $1''x\frac{3}{16}''$. If you would like to have samples of Thermo-Tape, or would like further information, write to Johns-Manville, Box 60, New York 16, New York.

JOHNS-MANVILLE PRODUCTS **Johns-Manville** **94 YEARS OF SERVICE TO TRANSPORTATION**

New Switch Rod

The Type "MJ" adjustable vertical switch rod, which permits a 3-in. overall adjustment, has been introduced by the Ramapo Ajax division of the American Brake Shoe Company, Chicago. This adjustment, it is said, allows the rod to be used in various switch designs for both head and back rods, thus simplifying installation and allowing the exact throw to be readily obtained.



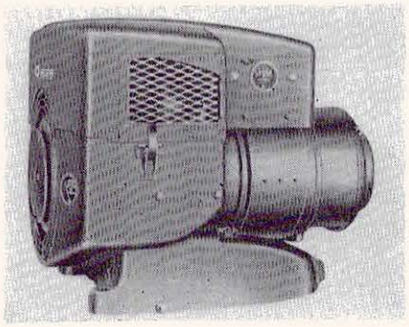
The clip assembly of the new switch rod.

The new rod is patterned essentially after the company's Type "M" design and is furnished with extra strong clips having serrations that correspond with those of the heavy 2½-in. by 1¼-in. rod. The teeth of these serrations are larger and deeper than normally used in switch rods, there being six per inch machined with rounded roots and tips.

The rod and clip assemblies are said to be sufficiently strong to permit the use of the "MJ" design at the busiest locations in heavy-duty hand, machine or spring-operated switches.

Emergency or Standby Power Source

A 3,500-watt a.c. electric generating plant with a 4,000-watt, 2-hour overload capacity has been announced by D. W. Onan & Sons, Inc., Minneapolis, Minn. The Model 305CK unit has been designed to meet the demand for higher capacity in small-sized electric plants. It produces 115-volt, 60-cycle current



The Model 305CK unit.

and is powered by the Onan "CK," two-cylinder, four-cycle, air-cooled gasoline engine. An engine improvement gives this model rated output of 500 watts more than similar Onan "CK". powered models.

Voltage regulation is plus or minus 3 per cent. The engine delivers its full rated load with a fuel consumption of 0.68 gal. per hr. Extra large main bearings and sturdy rod and crankshaft assure long life service. The revolving armature generator is direct-connected to the engine.

Snow Plow Attachment

A readily detachable snow plow unit designed for use on all Clark pneumatic-tired fork trucks except the 1,000-lb. "Truckloader," has been announced by the Clark Equipment Company, Battle Creek, Mich.

The plow is a non-hydraulic attachment which is adjusted manually to several blade angles, and which is mechanically adaptable to uneven ground surfaces. The ballast box portion of the attachment goes directly over the forks and may be loaded with any suitable material to provide drive-wheel traction. The blade is 3/16-inch thick and 23½-inches high, and is attached to the plow assembly by a single vertical pin around which the blade may be rotated for angle adjustment. A compression coil spring acts as a shock absorber.

The snow plow is readily detachable, and requires no tools for mounting or dismounting. Two metal legs at the base of the plow assembly permit it to be stored in an upright position. Although primarily designed for snow removal, the plow may also be used for grading, back-filling and similar light yard maintenance operations.

Dimmers for Fluorescent Lamps

A practical system for dimming fluorescent lamps smoothly and efficiently has been announced by General Electric lighting engineers at Nela Park, Cleveland, Ohio. The brightness of fluorescent lamps can be controlled merely with the turn of a knob, as smoothly and easily as incandescent lamps have been dimmed or brightened in the past.

The control will be available for use with either the conventional 40-watt preheat type lamp, or with the new 40-watt Rapid-Start fluorescent lamps.

Two sizes of controls will be made, one operating up to eight lamps, and the other up to 35 lamps. They can be turned on instantly at any point in the dimming range, and may be dimmed from maximum brightness until they produce practically no light at all, and then may be brightened in the same manner.

They maintain their original color during the dimming process, while the light of filament lamps turns increasingly red.

Smooth dining on Armco wheels

Some people seem to eat for free, but it's because they have the right equipment. Today, more than ever, proved equipment like Armco Wrought Steel Wheels is necessary for modern trains. Higher speeds mean quicker stops—and an increasing need for wheels that will withstand severe braking under passenger cars and the high and complex stresses imposed by Diesel service.

Here is why you can rely on Armco wheels. Seventeen years ago an intensive, permanent program of wheel research was set up. Since then, special laboratory tools have been developed to simulate—and even exceed—the most punishing service conditions.

For example, to study the effects of severe braking, one testing machine brakes a wrought steel wheel at 120 m.p.h. to a stop in 15 seconds, with 20,000 pounds of pressure on each brake shoe. Hundreds of such tests on wheels of different analyses and heat treatment have provided invaluable data.

This never-ending research work, along with the experience of 44 consecutive years of wheel-making, is responsible for the present Armco Wrought Steel Wheel. Latest methods of quality control, from melting of the steel to final heat treatment, insure uniformity from wheel to wheel—offer you greater peace-of-mind.

It will pay you to investigate Armco Wrought Steel Wheels. Just get in touch with our nearest District Office or write us at the address below.

Armco Steel Corporation

4782 Curtis Street, Middletown, Ohio • Plants and Sales Offices from Coast to Coast • Export: The Armco International Corporation

ARMCO

Shows Railroad Freight Capacities at a Glance!

U. S. RAILROADS MAP

Prepared by
PROFESSOR EDWARD L. ULLMAN
UNIVERSITY OF WASHINGTON

- CLASSES ROADS BY LOAD CAPACITIES
- SIZED 34x44 INCHES FOR WALL OR DESK USE
- PRINTED IN 3 COLORS, FOR EASY READING
- ACCURATE, COMPREHENSIVE, MODERN

A Unique Idea in Maps

You'll certainly want a copy of this remarkable map of U. S. railroads. Nothing like it has ever been devised. Prepared under the direction of Professor Edward L. Ullman, University of Washington, it combines the unique advantages of a map with the simplicity and information of a graph. It shows you U. S. railroads from an entirely different and important viewpoint.

Classifies Roads by Capacities

Consider the convenience of having reliable information of this sort instantly available. A glance at the map shows you all major U. S. railroads divided into these six classifications: three and four track roads, double track roads, single track roads with centralized traffic control, single track roads with automatic signal installations, other important single track roads, all other trackage. Electrification is also shown. In every case, carefully verified data were used. Thus, the map is not only the first of its kind, but also one of the most modern and accurate U. S. railroad maps available.

Size, Color Make Map Easy to Read

Nearly three feet high by four feet wide, the map is ideally suited for display and use on wall or desk. Trackage is shown in dark blue; railway names, state boundaries, and major cities in grey; water areas in light blue; and special symbols in red. The combination of size and three-color printing on white paper makes it simple for you to tell instantly the traffic potentialities of roads in any section of the United States. The research, the expert knowledge, the painstaking labor, and expensive production represented in this map make it an outstanding value at only $2.50. Once you experience the convenience of using it, you'll say it's the most useful map you've ever owned. Order yours today.

FREE EXAMINATION COUPON

Railway Age, Dept. 1215-52
30 Church St., New York 7, N. Y.

Please send me for Free examination a copy of U.S. RAILROADS MAP. If after 10 days I am not completely satisfied, I will return the map and owe nothing. Otherwise, I will remit the price of $2.50 plus a few cents for postage and handling.

Name .....

Street .....

City, State .....

Benchmarks and Yardsticks

PEOPLE WITH A SENSE of responsibility for the welfare of the railroads might well give some time to reflecting upon how seriously this industry is disadvantaged by the lack of competent and up-to-date textbooks on most phases of railroad work.

The problem does not lie in the field of the publishing business. A comprehensive and acceptably authoritative text on railroad operation, or accounting, or mechanical practices, or maintenance of way, or labor relations or other departmental procedure ought to sell sufficient copies to reimburse the publisher, even though it could not possibly enrich him. The problem lies, rather, in getting competent authors to write such books.

If a book sells three or four thousand copies at a price of $5 or $6, the normal royalties the author could expect would range from $1,500 to $2,400. Producing such a text would probably consume a full year of a man's time, and there aren't very many people, probably, who could write such authoritative texts whose time is worth less than $10,000 a year—if not considerably more.

Under such circumstances, strictly commercial considerations are not likely to produce books of this kind. The authors, if they are to be found, will probably have to be retired people or people of independent means who would be willing and able to put in a lot of time just for love of the thing, and without expecting adequate monetary reward. An alternative might be for some of the various railroad associations to assign a competent man to authorship of a desirable text in the field or fields of their interest, paying him a salary while so occupied.

An alert operating officer of a large railroad, when your reporter discussed this situation with him, was not impressed with its importance. "You can't learn railroading out of a book," he said. "The only way you can learn it is by actual experience."

No disagreement here. You can't learn a foreign language by reading a book about it either—but the book helps. For that matter, you don't learn English by reading a book—but by years of actual practice in speaking it and hearing it. You *could* learn English, and learn it well, just by speaking and hearing it, leaving books entirely out of it. But combining the books with the actual practice achieves the result faster, and probably better, than with practice alone.

Undoubtedly it's the same with railroad textbooks. They'd be no substitute for experience, but they'd be a valuable supplement to experience and help it along. But where are the authors?

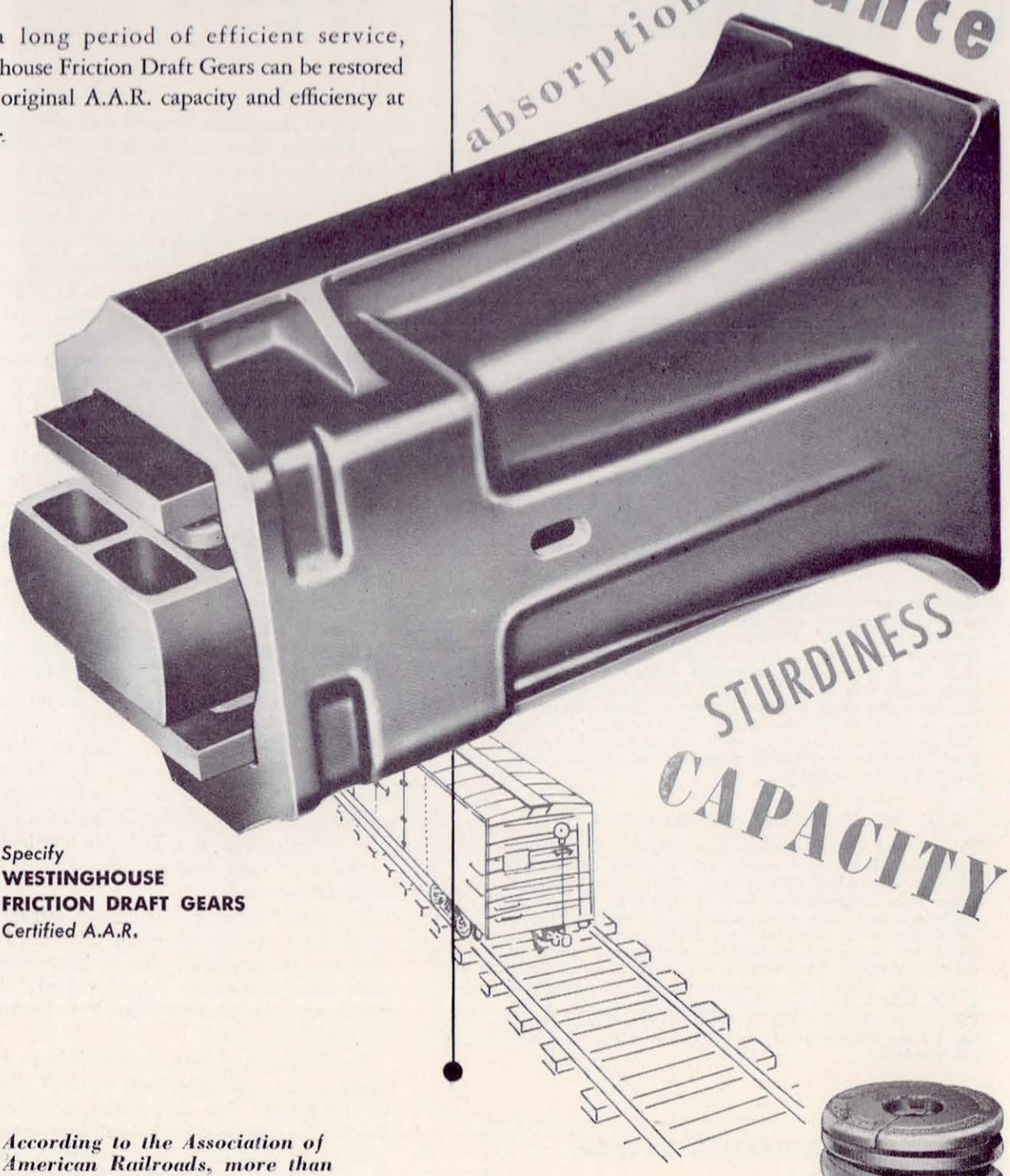
J. G. L.

EFFICIENCY RESTORED

After a long period of efficient service, Westinghouse Friction Draft Gears can be restored to their original A.A.R. capacity and efficiency at low cost.

endurance

absorption



STURDINESS

CAPACITY

Specify
WESTINGHOUSE
FRICTION DRAFT GEARS
Certified A.A.R.

According to the Association of American Railroads, more than 98% of cars in freight carrying service are A.A.R. construction and are equipped with Friction Draft Gears.

CARDWELL
FRICTION BOLSTER SPRINGS
for A.A.R. and Long Travel Springs

5899 RRR

Cardwell Westinghouse Co., Chicago
Canadian Cardwell Co., Ltd., Montreal

PLOWMAN'S PROPHECY

In a short speech at the opening of the Southern Railway's Oliver yard at New Orleans a few weeks ago, E. G. Plowman, traffic vice-president of United States Steel, rose far above the polite iteration of the obvious, which is all that can be fairly expected of a speaker on such an occasion. He went further and gave full play to his optimism and his informed imagination about the future progress of the railroads. His observations could be truly prophetic, with significance far beyond the single event which he was helping to celebrate. Here, in substance, is what he said:

"Not very many years ago, railroads thought of their passenger stations as requiring Queen Anne fronts. Entirely too many railroads treated their yards as the Mary Ann back counterpart of their luxurious passenger stations. That is no longer true. This fine new Oliver yard is just as important in selling and developing traffic as is the passenger station.

"I like to think of this yard, bearing the name of one of the great railroad traffic executives of this nation, as being willing and able to sell and develop freight traffic. For example—the long-sought-for national system of classification of freight cars at origin rather than destination might be born here. If that happened this yard could be proud, indeed, since it would have found out how to reduce time in transit of our nation's freight cars.

"There is another great challenge to the thoughtful operators of this yard. Concealed damage due to end impact is the greatest single handicap of modern American railroading. End impact shocks occur largely in yards and are due to natural difficulties in controlling engine and car speeds. As a child I used to love to ride the dare-devil roller coaster. The cars would drop swiftly and the jerk as they started up the next hill was thrilling. I hung on and took that shock with my arms rather than my neck. But freight can't hang on. It just sits there on the floor of the boxcar or gondola or flat car and absorbs the forward energy of its 3, 6, or 9 miles an hour switching collision with the next car. All too often freight develops concealed damage. It is scratched or dented or squeezed or broken. Its value to the consignee is less or is nothing. Consignor and consignee then become more aware that trucks and barges don't require packaging and bracing of freight as if for a small earthquake.

"Some inventive American may invent a new kind of automatic coupler that will absorb and dissipate the forward energy of switching motion without the present concealed damage to cargo. Maybe the real answer is there. Let cars be switched into each other at 20 miles an hour instead of at creeping speeds and let a new type of coupler and draft gear take up the shock. There is a challenge in this end impact problem, however it is to be solved.

"Reflect for a moment on the traffic this yard will see and handle during the next half century. There will be many new raw materials and new products, some with new names and new uses. America is dynamic. It is expanding. This yard will surely play its own important role in handling new materials and products as well as those already well known and of long established usefulness.

"It has long been my belief that freight car design is in the midst of great change and substantial improvement. Since Elmer Oliver became vice-president of this system, in 1924, he has seen four new kinds of freight cars win some degree of acceptance. The flat car or gondola has been equipped with compartments, or steel boxes, each carrying a measured quantity of material. Long gondolas with 65 ft. 6 in. of clear inside length have become numerous and popular. The coal hopper has acquired a cover. This new covered hopper carries cement, flour, soy beans and many other commodities. The box car has, to the number of many thousand examples, become a device car. Its interior is fitted with semipermanent brackets and fixtures for loading many products, ranging from automobiles to package freight.

"The creative thinking that developed the compartment car, the long gondola, the covered hopper and the device-equipped box car has not become weary of resistance to change. It is a force to be reckoned with. An example is the covered gondola, which is being studied and worked on by many persons and concerns.

"In a way it is the modern freight classification yard that makes the specialized freight car possible and economic. With efficient yard handling, the one-way freight car can offset its lack of return loads by handling more loads per month. Here is another challenging opportunity for this fine new yard. Its operators can help make the specialized freight car a profitable car. Who knows where this will lead? Perhaps some brilliant yard employee of the future will show the nation's railroads how to design and build some new and valuable type of freight car.

"Yards are for traffic. There are some advocates of the opposite idea—that freight traffic exists in order to use railroad yards. This is a socialistic fallacy. Acting on this assumption, at least one foreign nation has prohibited a truck from carrying a load beyond the nearest railroad station. This foreign country's state-owned railroad thus has a legal monopoly on all but local truck traffic, which local trucking must act as feeder to each nearby railroad station. Under our American plan, on the contrary, each railroad gets and retains only the freight traffic that it deserves.

"This distinction is at the heart of our private enterprise

system. Private enterprise keeps America great. The customer is king. This new yard investment is intended to improve and make more efficient the handling of freight cars in and out of New Orleans. It has been built and will be operated to sell and develop railroad traffic."

No prophecy—except the spurious tea-leaf variety—pretends to foretell the inevitable. The true prophet foresees, instead, what *might* happen if the people who *could* make the prophecy come true are as big in mind as the prophet is. This paper believes that there are a lot of railroad men—yes, and manufacturers for the railways—who regularly read these pages, whose view of the future of the railroad industry is as large and as optimistic as Mr. Plowman's. These people will welcome having on their side so articulate an advocate as he.

If railroad men preferred the lazy path of "security" to the dangerous one of enterprise, they would not be fighting, as they are, to get their regulatory shackles removed, so they may have greater freedom in competition. Instead, they'd be resigned to their chains and be seeking to have the same chains applied to their rivals. If they sought "security" through coercion, they'd be looking for monopoly by political action, instead of spending, as they are, all the money they can lay their hands on to improve their facilities and service.

Ideas dominate actions. Ideas have no really effective existence unless they are expressed in dramatic terms which quicken the imagination and determination, while not affronting commonsense. A lot of railroad men, we suspect, will find that Mr. Plowman's words express thoughts they've been entertaining for some time, but maybe not so concretely. Anyhow, that's how they hit us.

Let's get on, then, with restoring private enterprise to transportation—untrammeled, and unmitigated and unqualified! Let's leave to those naive interests who've not yet suffered at government's hands as the railroads have their enormous publicity campaigns for increased government hand-outs. While they are whooping it up for *more* government intermingling in their business, surely it's the American way the railroads are following by demanding *less*.

THE OTHER SIDE OF THE TRACKS

"We expect to be a regulated industry. But we think that regulation should be only that which is sufficient to protect the public interest and no more. We are firmly convinced that the philosophy of government regulation which has dominated our industry is working against the national interest—which is also your interest. If we can prove that to you, we would like your help and the help of all who believe in free enterprise. . . .

"Ours is a competitive industry . . . The times have changed, but the rules haven't. The ghost of a long-departed past lives on in the monopoly-type regulation still imposed on the railroads. . . .

"Today your railroads cannot adjust prices promptly—up or down—to meet increased operating costs or to meet competition. They are stymied by local and state politics in seeking the right to abandon services for which there is no public demand or necessity. They cannot compete equally for business with other forms of transportation. And your railroads, butting their heads against competition that is partially subsidized—but still doing a large volume of business—have had earnings insufficient to maintain their credit, improve their properties, and increase their efficiency as much as is necessary and as much as they desire.

"Our business has been boom-size, while our profits have been depression-size. As a result the investor of equity capital turned his back on us long ago. We have been able to finance our purchases of new locomotives and cars principally through equipment trusts which are chattel mortgages on our rolling stock, and we have dug deep into our working capital to finance those improvements which have made our increases in efficiency very substantial. In fact, only the greatly increased efficiency of the railroads has allowed them to survive as a private business. . . .

"Some of you in your own businesses, and through industry groups of which you are members, have helped to keep us on the wrong side of the tracks. We have a lot in common—your industries and mine. But when we take a look at the record, we begin to wonder. Many times in the past when we should have been working together cooperatively for our common good, we were actually working at cross-purposes. . . .

"How, I ask you, can we get away from the wrong side of the tracks if representatives of business and industry continue to drive us back with thoughtlessly aimed brickbats? We expect to hear advocacy of creeping socialism from some people, but we don't expect to hear it advocated by your representatives and by associations representing you. But that is what we have had to contend with and that is one of the reasons why I welcome the opportunity of talking to you.

"Sometime ago the eastern railroads collectively came to the conclusion that the railroad situation existing with respect to outmoded regulation and depressed earnings needed some vigorous treatment, in order to get American businessmen—in what we think is their own self-interest—to take heed of a situation that bodes evil for the country. We are not seeking to deregulate the railroad industry . . . We accept the theory of regulation, but not beyond the extent that it is necessary to serve the public interest, and without trespass upon managerial responsibility. We are not trying to drive any of our competitors out of business, nor inflict upon them any additional regulation . . . What we seek is that regulation be modernized to meet present-day conditions, and to provide for all forms of transportation an opportunity to compete in the transportation markets of the country on a basis of equal opportunity, with favor to none, but fairness to all. . . .

"We ask you to join us in getting out of the ivory towers; to take a look at the things that are going on that don't directly affect you today, but might seriously affect you tommorrow; to keep an eye on the fellow who is on the wrong side of the tracks and help him get over on the right side."—*From an address by William White, president, New York Central System, at the 57th annual Congress of American Industry, sponsored by the National Association of Manufacturers.*

1 PROSPECTIVE passenger is greeted at entrance lobby of the new SP travel service agency by a floorman who. . .

2 ESCORTS him to one of the ten telephone sales booths. These are a key installation in the new sales setup.

3 LIFTING the telephone receiver automatically connects the passenger with a "travel specialist" elsewhere in the same building.

A New Approach to Volume Ticket Sales

Southern Pacific's telephone office system boosts capacity, eliminates long customer "lineups"

The Southern Pacific recently closed the doors of its city ticket office in Los Angeles. At the same time it opened a new "Telephone Sales Travel Office" on the street floor of its general office building at 610 South Main st., just two blocks distant. "In replacing our conventional city agency," said Claude E. Peterson, vice-president in charge of traffic, "we hope to provide a more attractive passenger sales service which will not be swamped during peak periods and which will also operate at lower cost."

Basically, the new travel office operates as an integrated part of the road's regular reservation and telephone sales office on the fourth floor of the same building.

The key to the integration is a series of 10 "sit down" public phone booths in the main floor office. Each phone automatically connects the prospective passenger with one of the telephone sales clerks in the upstairs office. In short, sales from the new agency are handled through the same channels as are the telephone inquiries which the upstairs office normally handles from most of southern California.

Advantages of New System

According to George B. Hanson, passenger traffic manager of the SP's Southern district, preliminary experience with the new office has indicated that:

(1) *"Lineups" can be eliminated.* Every customer is now "first" by reason of the fact that there is always a phone booth available where his needs may be heard without delay. There are no long lineups at ticket windows either, because they are used only to deliver prepared transportation.

(2) *Service can be faster.* Patrons securing long drawn out travel information or waiting for makeup of complicated tickets no longer create bottlenecks because additional phone booths may be opened up as needed. Sufficient help may always be obtained within the fourth floor office to handle incoming calls even at peak periods.

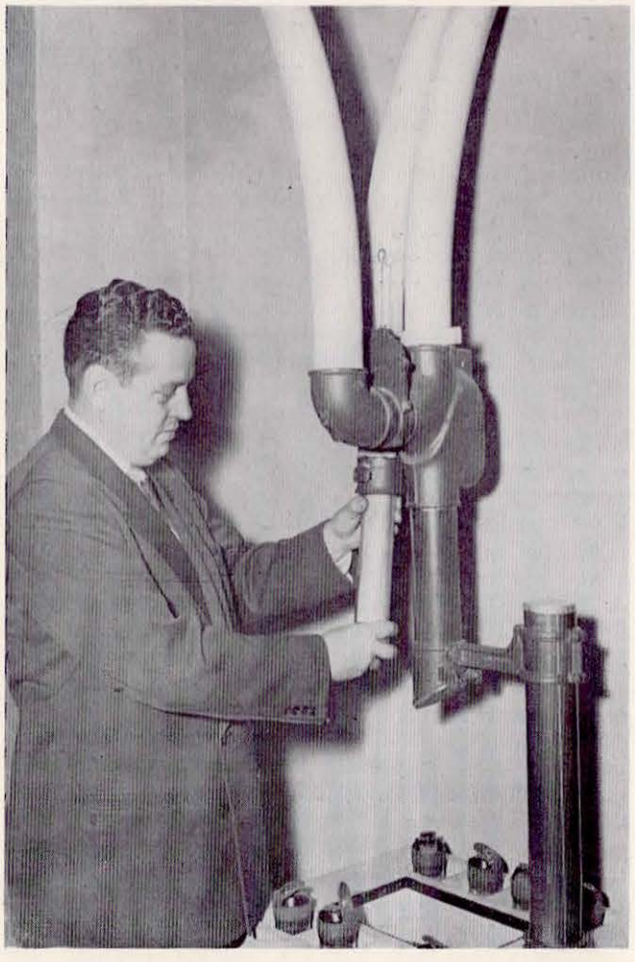
(3) *Volume capacity can be increased.* Sales personnel may be placed in any of the units of the system as the volume of business requires. Unanticipated peaks of as much as 50 per cent over anticipated sales volume have been handled and met without delay to patrons.

Mr. Hanson reports that the system also tends to encourage passengers placing orders by phone from home or office. This helps eliminate the repetitious task of first answering a passenger's phone inquiry and later duplicating that research to make up tickets and reservations when the passenger calls in person at the ticket office.

During the first week of operation, the average transportation order consumed seven minutes from the time the customer retired to the office lounge section until the ticket was tubed to the cashier's desk. Two additional minutes were required to complete the average sale. As the organization hits its stride, Mr. Hanson believes that the average total time will drop to six or seven minutes. While this may seem a bit long, it reflects the fact that a high portion of Los Angeles passenger sales are comprised of complex transcontinental tickets.

4 DEVELOPING travel plans, the specialist makes up orders which he turns over to the . . .

5 TICKET makeup section; tickets are executed . . .



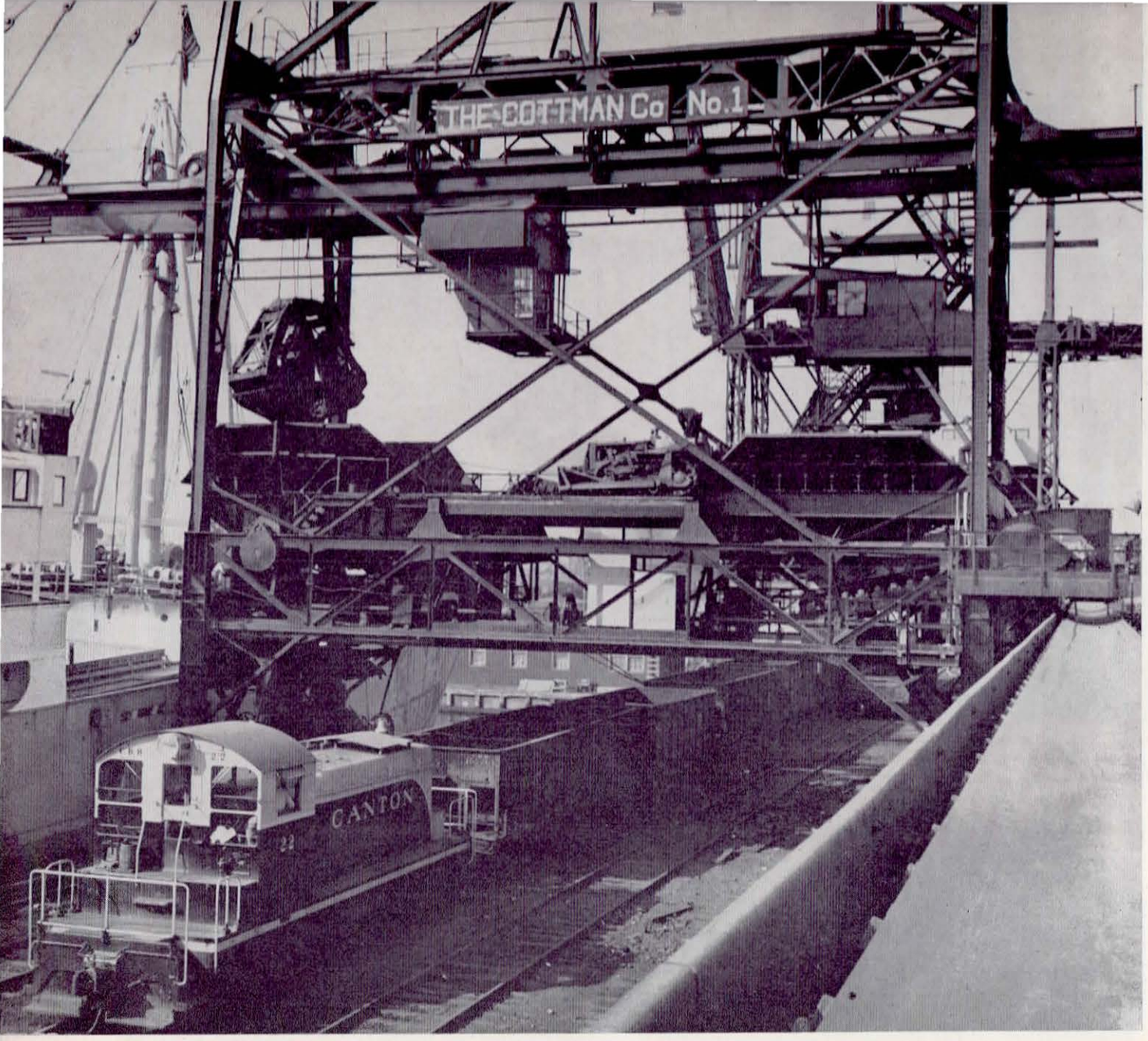
7 COMPLETED tickets are sent via this pneumatic tube system to the main-floor office where . . .

8 THE CASHIER announces on the public address system that Mr. Customer's tickets are now ready.

. . . by this staff on a continual production basis.

6 MEANWHILE, the passenger may choose either to wait for his tickets in the lounge or put in "will call."

9 SALE is then completed over the counter. Elapsed time: Nine minutes or less, during most of which the customer has been seated.



Ore lifted from the hold of the ship by the bucket of crane No. 1 can be deposited into one of two receiving hoppers located on the crane's lower deck, depending on whether the ore is to be loaded directly into cars or delivered to the high-line conveyor. This crane can unload ships at either side of the pier.

Anticipating Increased Imports . . .

Canton Railroad Expands Ore Dock

Ship-to-shore unloading capacity of plant at Baltimore doubled by widening pier and installing conveyors

By W. H. RAFF
Contract Engineer
Robins Engineering Division, Hewitt-Robins, Inc.

The ore-unloading facilities of the Canton Railroad in Baltimore have been expanded and modernized to speed up the transfer of incoming ore from ships to railroad cars. Recently put into operation, the new facilities have a maximum rated capacity of 3,000 tons an hour, almost double that of the former plant. The modernized dock is equipped with a giant conveyor system which can deliver ore from ship to shore at the rate of 50 cars (60 tons to a car) an hour. Also, the actual weighing capacity at the track bin can be increased beyond this rate in emergencies.

The expansion program was undertaken in anticipa-

tion of increased imports of iron, manganese, chrome and other ores coming in from new developments in Labrador, Venezuela, Brazil and Liberia, and at the same time to handle larger imports from older producing sources in Sweden, Norway, Portugal, Spain, Yugoslavia, Turkey, Cuba, Africa and the Far East. Ore imports are increasing because of the depletion of reserves in the United States.

Several years ago, Daniel A. Lindley, president of the Canton, together with the board of directors, decided to expand their facilities. To determine the best means of accomplishing this and to design and build the necessary improvements, they engaged Robins Engineers, a division of Hewitt-Robins, Inc.

Existing Facilities

The Canton ore pier juts southward from the north bank of the Patapsco river which forms part of the port of Baltimore. It is a finger-type pier, 90 ft. wide, and extends 1,253 ft. into the river. The west side of the ore dock has been dredged to a depth of 35 ft. and provides deep-water exposure sufficient to berth comfortably two large ore carriers. On the east side some 800 ft. of deep water is used mostly by barges, but ore carriers can also be unloaded there.

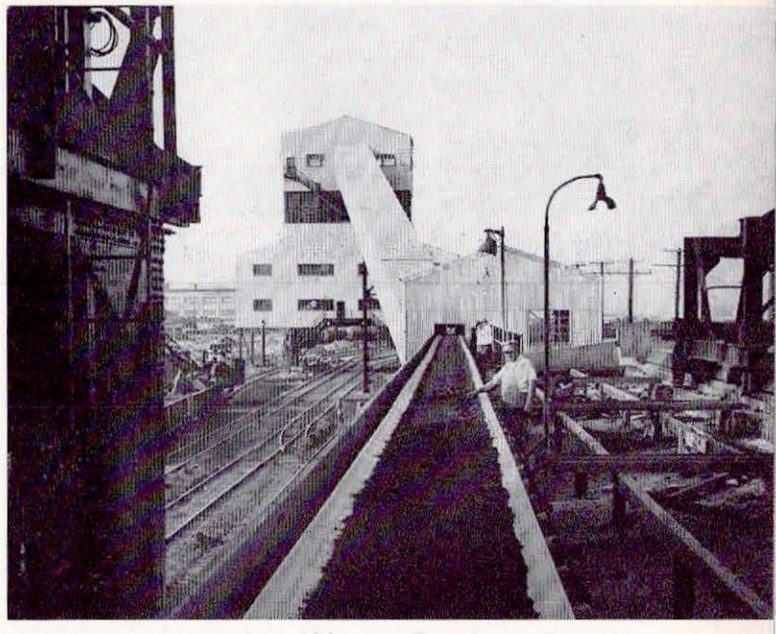
Four standard-gage railroad tracks, each with a capacity of 35 hopper cars, run the entire length of the dock and connect with the Canton terminal where ore trains are delivered to interchanges of the Pennsylvania, the Baltimore & Ohio and the Western Maryland. These tracks are numbered 1, 2, 3 and 4, beginning on the west side of the dock.

Before modernization, two cranes on the pier scooped up the ore from the holds of the ships and discharged it into receiving hoppers which dumped directly into railroad cars. Unloading tower No. 1, or crane No. 1 as the operators prefer to call it, is south of crane No. 2. Its old receiving hopper is on the west or ship side. It is equipped with a weigh larry which previously discharged the weighed ore to cars on any one of the four tracks. Crane No. 2 has its old receiving hopper on the east side and a weigh-basket scale under the receiving hopper which discharges weighed ore to cars on track No. 4 only.

To increase the unloading capacity of the dock, it was decided to install a new third crane on the offshore end, south of cranes No. 1 and No. 2. But this was by no means the entire solution to the problem. Even with the two present cranes operating, delay was experienced because of the lack of sufficient tail room for the ore trains. This was particularly noticeable when unloading a ship berthed at the south end. It therefore became obvious that with a third crane in operation, new weighing and car-loading facilities must be provided and that alterations must be made to the two present cranes so that ore from each of them might be conveyed to the new weigh station.

To accomplish this, the dock was widened along its 800-ft. east face and a new 48-in. high-line conveyor was installed along the entire east side. A second belt was installed to carry the ore from the main belt up a 16-deg. incline to a new weigh station, 100 ft. high, erected on the shore so as to provide about 1,600 ft. of tail room. Atop the weigh station is a large balancing hopper which receives the ore and feeds it into four smaller weigh hoppers, each located over one of the railroad tracks. The weigh hoppers, scales and weight recorders are electrically interlocked in a fixed cycle to regulate the flow of ore into the cars. For the time being, the main

The "high-line" conveyor belt was especially selected for this severe service. It consists of seven plies of 42-oz. long-staple cotton duck with two bottom plies nylon filled. The belt was vulcanized to make it endless.



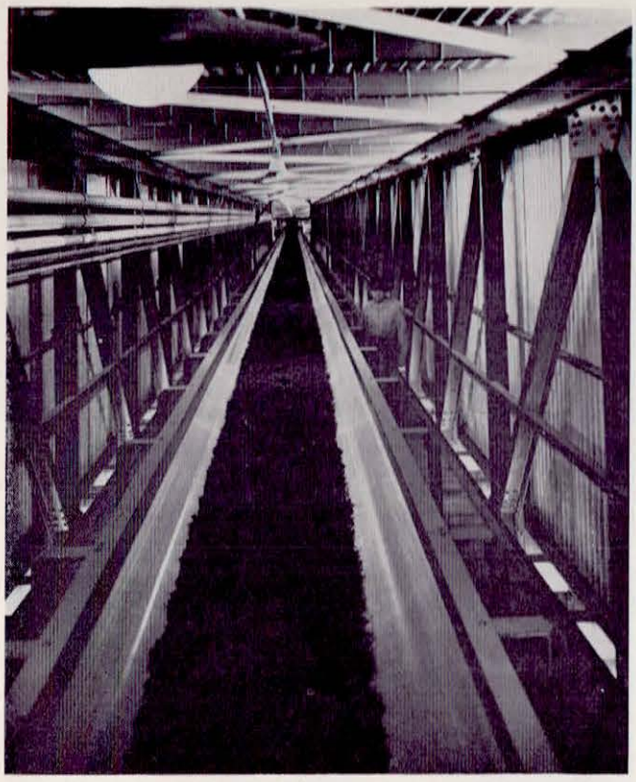
The high-line conveyor is 1,336 ft. long, as it carries ore toward the junction house. This view was taken before the four tracks had been lined over to pass under the new weigh station (background).

belt will be fed by the two altered ship-unloading cranes until the third crane is put into operation in the second quarter of 1953.

The problems involved in altering the two cranes so that they might discharge to the new high-line conveyor were many and complex. Numerous preliminary studies were made on each before the final schemes were adopted.

A new hopper was installed on the east side of crane No. 1 (Fig. 2) and two 42-in. wide manganese-steel feeder conveyors with a common drive were provided to transfer the ore from this hopper to the new high-line belt.

Since there would be considerable wear and tear on the expensive belt of the high-speed high line if the two feeders, side by side, were to discharge directly at right angles onto it, a short rugged transfer conveyor was mounted on the crane, directly over and in line with the high-line conveyor. The transfer conveyor not only takes the pounding of the heavy ore but also eases it gently onto the high-line belt in the direction of its travel and



At the junction house, this conveyor, 275 ft. long, receives the ore from the high-line belt and carries it up a 16-deg. incline to a surge bin on top of the weigh station building. The speed of this belt is 615 ft. per min. as compared with 545 ft. per min. for the high-line conveyor.

close to its speed. This short belt, having little tension, is of less expensive construction and can be easily replaced.

To provide room for this new equipment, it was necessary to shorten the old weigh larry travel so that it will now service tracks No. 1 and No. 2 only instead of all four of the ore dock tracks as formerly.

More Extensive Crane Alterations

The alterations to crane No. 2 were of a more formidable nature. On this crane (Fig. 3) a new receiving hopper was installed on the west or ship side about 11 ft. lower than the old hopper on the east side so as not to interfere with the arc of the bucket travel. The main deck under this new hopper was depressed to accommodate two 42-in. wide manganese-steel feeders with a common drive, similar to those installed on crane No. 1.

These feeders carry the ore southward over the main girder of the crane and deliver it to a new 48-in. transverse conveyor (No. 2A). This conveyor is inclined, runs east along the south face of the crane and delivers in turn to a new reversible conveyor (No. 2B). When running eastward, this latter conveyor feeds the high-line belt and, when running westward, services track No. 3. A weightometer was installed on conveyor No. 2A so that any material going to track No. 3 can be weighed. It will be noted that crane No. 2, which originally fed track No. 4 only, now can service tracks No. 3 and No. 4, whereas crane No. 1 will deliver to tracks No. 1 and No. 2.

Conveyors No. 2A and 2B, the weightometer, and the drives and access platforms, are all supported on a cantilevered structure along the south face of crane No. 2. Analysis had revealed that the existing cranes, as well as their trucks and traverse drives, were capable of sustaining the new loads.

When crane No. 3 is installed, its hopper will be on the west side. Through a weigh larry it will deliver to ore cars standing on tracks No. 2, No. 3 and No. 4. A 60-in. wide manganese-steel feeder will feed a 36-in. conveyor which in turn will discharge to the high-line belt. This feeder will be mounted on a carriage so as to allow the larry to receive its load from the hopper when the feeder is not being used.

The two existing cranes, under ideal conditions of free digging and heavy ore, have each handled better than 900 long tons an hour. It is expected that, when the bottleneck on the dock is eliminated with its attendant delays in providing cars, the capacity of both cranes will be increased. As a safety factor, all new conveying equipment on each crane is designed to handle 1,200 long tons an hour. It is not practical to expect all three cranes to be operating simultaneously at maximum capacity. The high-line and slope conveyors are therefore designed to handle 3,000 long tons an hour.

The 48-in. high-line conveyor is 1,336 ft. long. It begins at the extreme south end of the dock and runs to a junction house just beyond the north end of the crane tracks. The belting is of the finest quality, especially selected for this service, and travels at a speed of 545 ft. per min. The 48-in. slope conveyor travels at a speed of 615 ft. per min. and carries ore received from the high-line belt up to the surge bin of the weigh station.

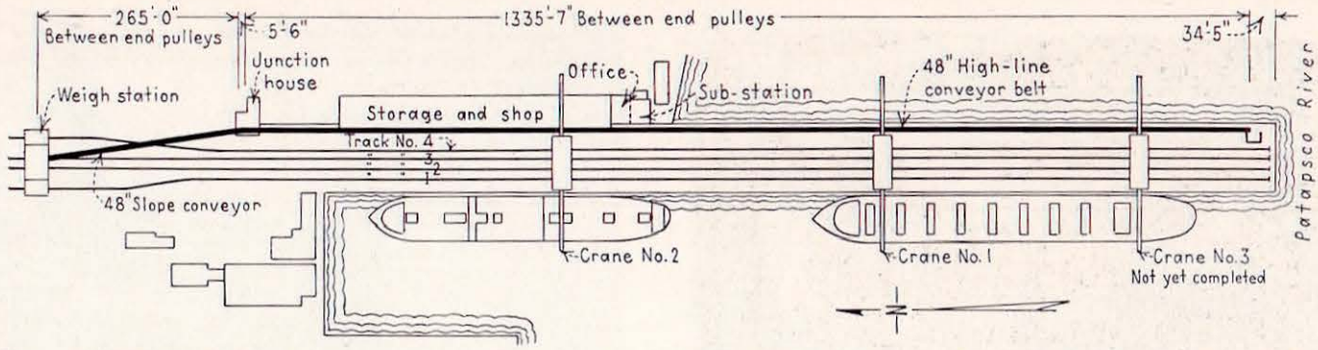
Weigh Station Serves Four Tracks

In many respects the weigh station is the heart of the plant. In general, it consists of a bifurcated surge bin, each leg of which discharges to two feeders. These feeders service four weigh hoppers mounted one over each track, and are 72 in. wide with a capacity of 2,500 long tons an hour.

The capacity of the surge bin varies from 600 long tons to 1,800 long tons, depending on the weight of the ore and its angle of repose. With 150-lb. ore, it will hold about 1,000 long tons, sufficient for 24 minutes' supply with all three cranes operating at maximum speed. Electrically operated swinging gates permit diverting all of the ore to either side of the bin. This arrangement of gates and feeders permits unusual flexibility in loading cars as all four tracks can be loaded simultaneously or any combination of tracks can be loaded.

Another unusual feature is the inclusion of two cleaning scaffolds. Each of these is suspended in the bight of a steel cable in such a way that when idle it will clear the pile, but when used for cleaning, it can be both lowered and moved sidewise to give access to all of the interior surfaces of the bin. Because one ship may carry ore of a sticky nature which will hang up on the bin walls, while the next ship may have an entirely different ore destined to another consignee, it will be seen that bin-cleaning facilities are of importance.

The weigh baskets and scales are of exceptional interest. In a privately owned ore dock such as this one, ore cars of many types and capacities are encountered. They will vary from 50-ton cars with a load limit of 120,000 to 128,000 lb. to 90-ton cars with a load limit of about 210,000 lb. They may be bottom-dump, side-dump or gondola cars. Investigation at other ore docks disclosed that the average load per car over a year ran about 65 long tons, or 146,000 lb. Allowing a slight margin of safety, we assumed an average car load of 140,000 lb. It was thought desirable to have the load-



The ore dock was widened on its east side to support the high-line conveyor. Another belt conveyor takes the ore from the main belt at the junction house and carries it up an incline to the weigh station.

ing capacity at each track equivalent to that of any one crane. By means of the bin-diverting gate, either the east or west pair of tracks could be used for one crane with one track loading, while the loaded and empty ore trains are being switched on the other track. With all three cranes operating and the conveyor system carrying 3,000 long tons an hour, three tracks are to be loading while the fourth is being switched. Here again, a margin of safety was provided by establishing the loading rate at 1,200 long tons per hour.

With these two factors established, it was possible to develop the cycle at the weigh hoppers. On the basis of loading out 1,200 long tons an hour into cars at 140,000 lb. per car, it was determined that there will be 38.4 dumps an hour which, if roughed out at 40 dumps an hour, results in one dump in 90 seconds.

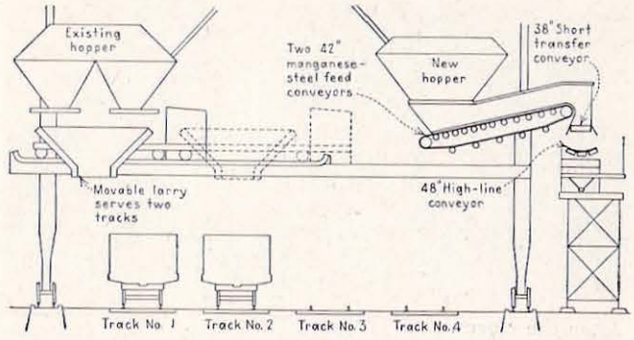
For this the scale cycle was arranged as follows:

Start feeder	2 sec.
Run feeder	50 "
Stop feeder plus time delay	10 "
Weigh loaded hopper incl. printing	5 "
Open gate	5 "
Empty hopper	8 "
Close gate	5 "
Weigh empty hopper incl. printing	5 "
Total cycle	90 sec.

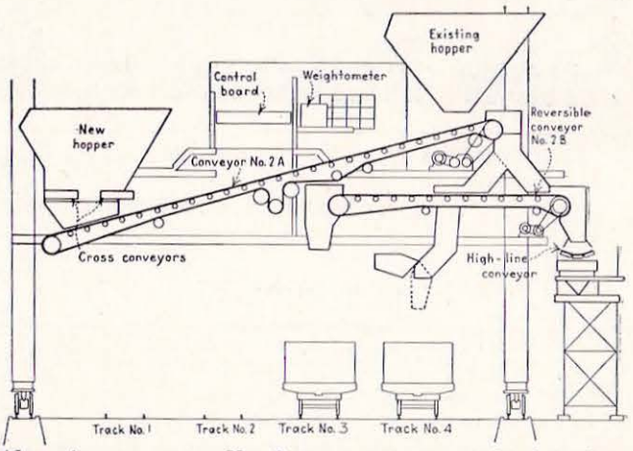
All of these operations are controlled from one panel by each weighmaster in his room. Special consideration was given to the two weighmaster rooms to make them attractive and comfortable. Their situation is strategic as they are hung under the weigh-hopper floor so as to give clear unimpeded views of the ore being dumped.

Normal operating practice is for the train conductor first to hand the weighmaster a set of cards which show the sequence of the car numbers and their load limits as they occur in the empty ore train. When the first car is spotted, the weighmaster sets his scale for the weight of the dump, which normally will be a little less than one-half of the car's load limit.

The weighmaster then starts the feeder. As the hopper fills, the scale pointer revolves and, when it reaches the predetermined setting, the feeder stops automatically. There is then a few seconds time delay to allow any loose material to drop off the feeder, after which the operator enters his card into the printweigh and records the weight of the load. By pushing the start button of the motor-operated gate, he opens the gate and dumps his load. When the hopper is empty, he closes the gate and stamps a second reading on the card, recording the weight of any material hanging up in the hopper. The cycle is then repeated. During the 50-second interval for filling the hopper, the cars are shifted to receive the next load. Railroad signal lights provide communication between the weighmaster or conductor and the engineman of the ore train.



To prevent excessive wear and tear on the expensive high-line belt, which would occur if the ore were dropped from the two manganese-steel feeders of crane No. 1, a rugged short collecting conveyor was mounted directly over the high-line conveyor. The travel of the old weigh larry was shortened so that it will serve tracks No. 1 and No. 2 only instead of all four tracks as formerly.



Alterations to crane No. 2 were more extensive but they enable this crane now to serve the high-line conveyor and cars on both tracks No. 3 and No. 4, whereas, formerly, it could serve cars on track No. 4 only.

The predetermined settings will vary with the load limits of the ore cars. By means of an ingenious device, the weighmaster will set his scale for these cut-offs without opening the dial head. Seven photoelectric cells are mounted in the back of the head which, when intercepted by an opaque pointer, will open the feeder circuit. These cells are actuated by a selector switch on the operator's panel board.

In addition to the conveyor system and the additional crane to be built later, the Canton is building a new 500-car supporting yard for the ore pier. This project involves five miles of new track.

After the storm.

Easy wheeling for a rotary snow plow.

How Much Horsepower?

Snow Removal in Mountain Districts

When requirements are compared with past practice, the author concludes that railroads have been using a boy to do a man's job

By L. WYLIE
Electrical Engineer
Chicago, Milwaukee, St. Paul & Pacific

Apparently the design of rotary snow plows and other heavy equipment for removing snow from railroad tracks in mountainous country in the United States (outside of yards and terminals) has not made the best use of engineering or factual considerations; otherwise, the railroads would not find their best equipment able to make a headway of only ½ to 2 miles per hour in extremely heavy snow.

There is need for factual information on design of equipment and amount of horsepower necessary to remove snow from tracks at a rate sufficiently high to keep the tracks clear and open. Obviously efficient snow handling machinery cannot be developed without such information. The following figures are presented with the hope that they will help to make the problem more clear to railroad officers who may be interested in snow removal problems.

The weight of freshly fallen snow is from 2 to 5 lb. per cu. ft., depending on temperature, locality, moisture content, etc. The weight of old snow of considerable depth or of drifted snow is 6 to 30 lb. per cu. ft. The weight of snow in large slides is 30 to 45 lb. per cu. ft.

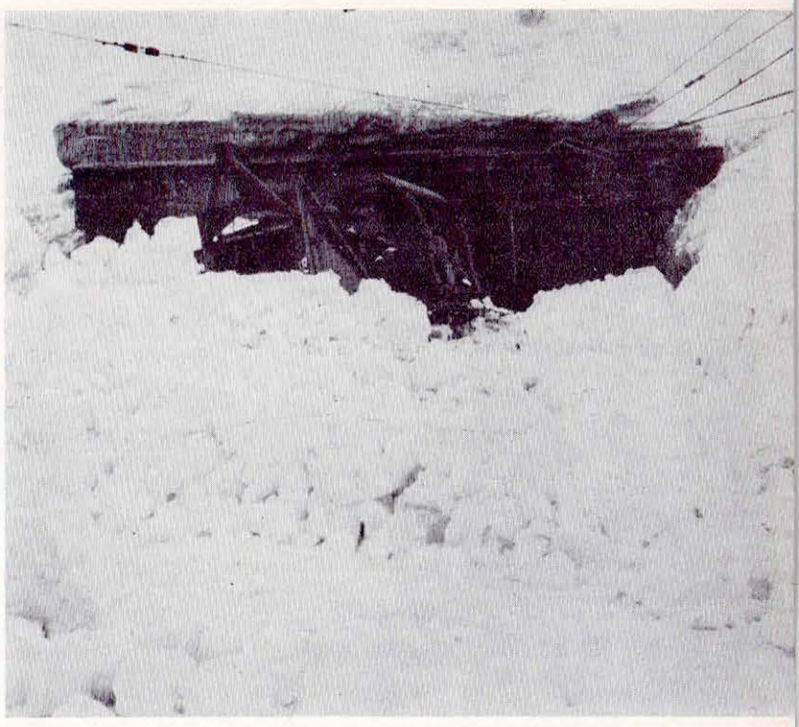
The highest rate of snowfall will be 4 to 12 in. per hour, depending on locality, temperature, and water content of snow. Drifting can occur at almost any rate, depending on the character of the snow, the velocity of the wind, and the nature of obstructions causing reduction in wind velocity.

We can assume that snow must be elevated to a height of 12 ft. above the top of rail and discharged at a velocity of 86.5 ft. per sec. This velocity corresponds to the rim speed of a rotary snow plow wheel 11 ft. in diameter, operating at 150 r.p.m. so that snow will be thrown well into the clear of the track.

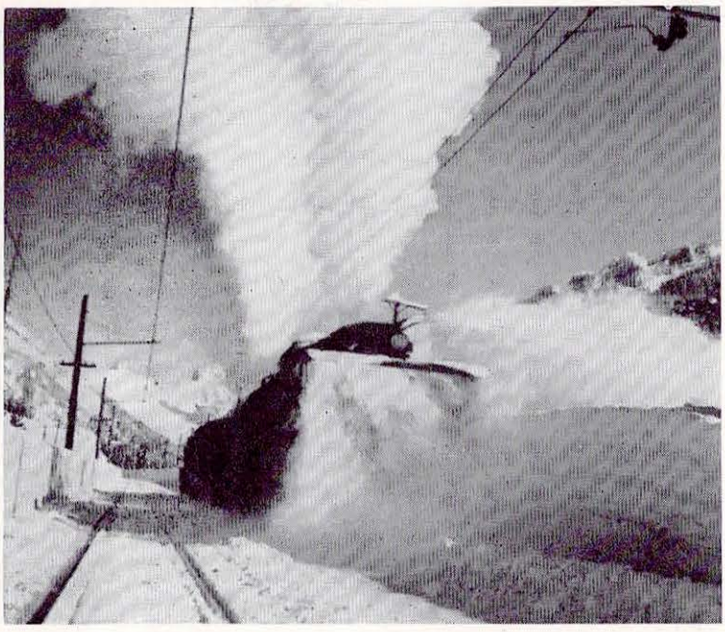
As the discharge opening of a conventional rotary snow plow used by the railroads is usually less than 10 per cent of the face or intake area of the wheel, the velocity of discharge from the plow must be many times more than the speed of the forward movement of the plow, depending on the depth of snow being removed and the horsepower available for driving the rotor of the snow plow.

The calculated weight of snow per mile of track and the corresponding horsepower required by a rotary snow

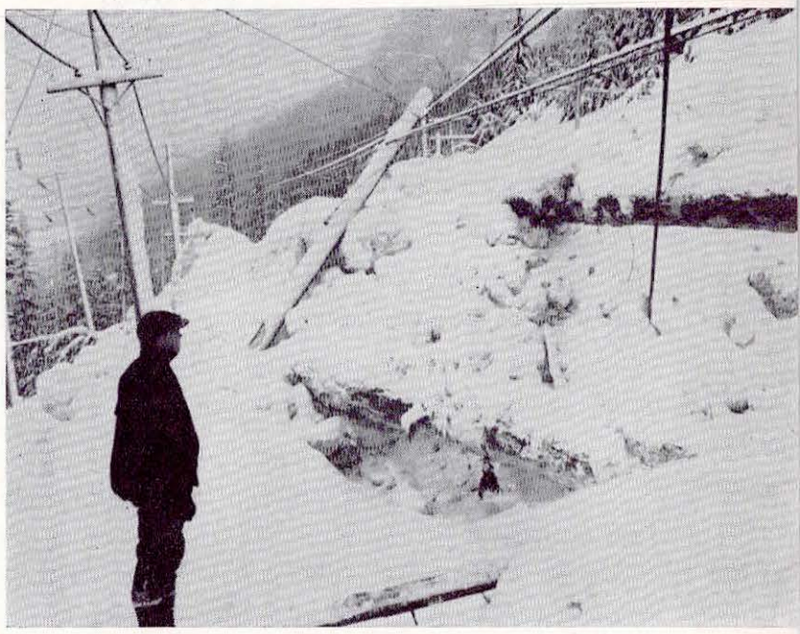
There is a railroad down under somewhere.



Digging down to a tunnel entrance with a DD-8 bulldozer.



A rotary plow following a cut widener.



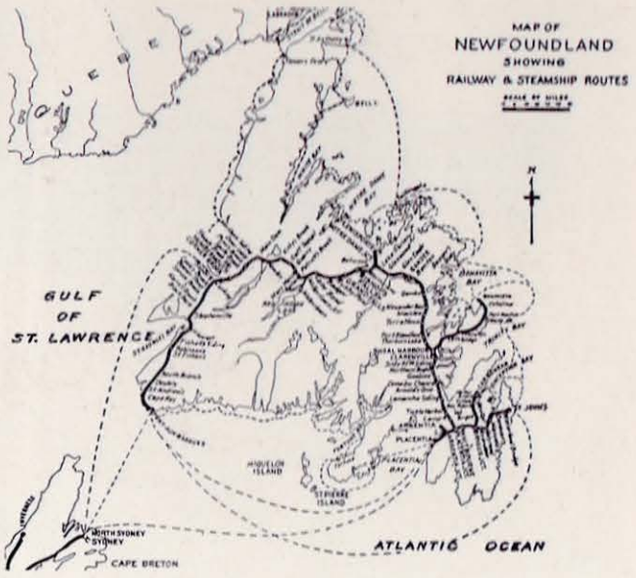
Only a large size caterpillar "dozer" can handle this.

plow to remove the snow at a track speed of 1 m.p.h. and at 10 m.p.h. would be as follows:

Depth of snow	2 ft.	4 ft.	6 ft.	8 ft.	10 ft.
Width removed	11 ft.	11 ft.	11 ft.	11 ft.	11 ft.
Weight per cu. ft. (lb.)	4	7	9	20	30
Weight per mile (lb.)	464,640	1,626,240	3,136,320	9,292,800	17,424,000
Weight removed per second at 1 m.p.h. (lb.)	129	524	871	2,580	4,840
Weight removed per second at 10 m.p.h. (lb.)	1,290	5,240	8,710	25,800	48,400
Speed of rotor (m.p.h.)	150	150	150	150	150
Horsepower required at 1 m.p.h.	30	120	200	600	1,129
Horsepower required at 10 m.p.h.	300	1,200	2,000	6,000	11,290

The figures shown above for horsepower do not take into consideration any losses due to friction, windage or other losses in machinery.

We believe that the above figures show—even allowing for some unknowns and some errors in assumption—that in the matter of horsepower output of equipment used to remove snow from railroad tracks during periods of heavy snow storms, some railroads have been using a boy to do a man's work. This assumption appears to be borne out by inability to keep tracks clear for the safe movement of trains during periods of heavy snowfall.



CNR's Newfoundland Lines

Serving Canada's Newest Province

While Newfoundland is looked upon as the oldest British-settled portion of North America, and its railway dates back to 1881, nevertheless the province may be considered, economically, to be "frontier" country and its railway a pioneering enterprise. This is because Newfoundland has only lately come into the orbit of Canada's industrial boom; rapid expansion of its economy is making the same demands upon its railway as that of any frontier territory.

As one of the conditions of joining the confederation of Canada as its tenth and newest province, the former crown colony of Newfoundland stipulated that its government-owned railway should be turned over to the Canadian National for operation, though title should continue to be vested in the government—as is true of all the so-called Canadian Government Railways properties operated by the CNR since 1921. On April 1, 1949, the date of union, the CNR acquired for operation 705 route-miles of railway and 14 ships and added some 4,000 employees to its payroll. The terms of union also stipulated that "for the purpose of railway rate regulation, the Island of Newfoundland will be included in the Maritime region of Canada, and through traffic moving between North Sydney and Port-aux-Basques [the main ferry route between Newfoundland and the CNR mainland lines] will be treated as all-rail traffic."

Carrying out this provision effected a substantial reduction in rates applicable to Newfoundland operations. Simultaneously, CNR standards of rates of pay and working conditions were extended to the Newfoundland properties, now operated as a district of the Atlantic region of the CNR. These two forces worsened the already chronic failure of the Newfoundland properties to make ends meet. Upon assumption in 1949, it was estimated that in operating the Newfoundland the CNR would incur an annual deficit of about $4 million.

The property which the CNR took over comprised 705 route-miles of 3-ft. 6-in.-gage railway. The 547-mile main line crosses the island from St. John's to Port-aux-Basques circuitously like an inverted "U." From the latter terminus there is a passenger and freight steamship service to the CNR mainland rails at North Sydney, N.S. Because the gages are different, railway rolling stock is not ferried between these points. Branches connect the Newfoundland main line with Harbour Grace and Carbonear, with Placentia and Argentia, with Lewisporte and with Bonavista. Rolling stock at time of union comprised 46 steam and three diesel locomotives; 98 passenger-train cars; 1,004 freight cars and 154 units of work equipment. Through the end of 1951 the CNR placed in service in Newfoundland 6 steam locomotives; 60 box, 30 auto box, 50 flat, 10 express-refrigerator, and 3 baggage cars and 8 coaches—all new and specially designed for narrow-gage operation. Vital rehabilitation of the fixed properties was started immediately after assumption of operation and has been pushed vigorously ever since.

New Ice-Breaking Ferry

Added to the fleet of passenger and freight steamers taken over in 1949 will be one of the largest and most modern ocean ferries in the world, now under construction in Montreal for the Canadian federal government, for operation by the CNR. The new ice-breaking ferry will be equipped with flat decks and elevators for handling some automobiles, trucks and trailers, in addition to passengers and cargo. Railway freight is to be transshipped in 6-ton containers, handled to and from the ship elevators by large fork-lift trucks. On board ship the containers will fit into prepared locations, secured from shifting while the vessel is at sea. For consignees and shippers equipped to handle them, the containers will be used through from rail origin to rail destination. Otherwise their contents will be loaded and unloaded for rail movement at each end of the water journey.

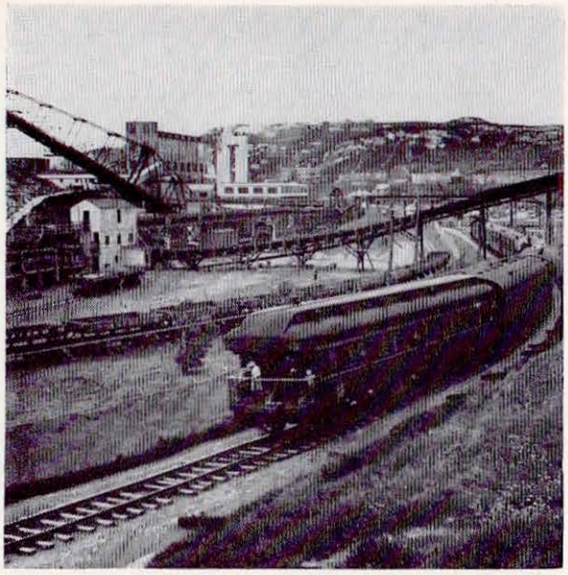
A new dock and terminal at Port-aux-Basques and a new dock at North Sydney are also being constructed to make for faster transshipment. Combined cost of the ship and enlarged terminals are expected to come to $8 to $9 million.

The former Newfoundland railway entered into the economic life of the country in unusual ways. It owned, for example, a drydock at St. John's—not only for its own steamer fleet, but for commercial repair jobs. It operated local and long distance telephone service on the island, as well as telegraphs and cables. Its telegraphers in the more remote spots also acted as postmasters. These ancillary services were taken over intact by the CNR, but some of them, like the postal functions, are expected to be transferred as soon as possible.

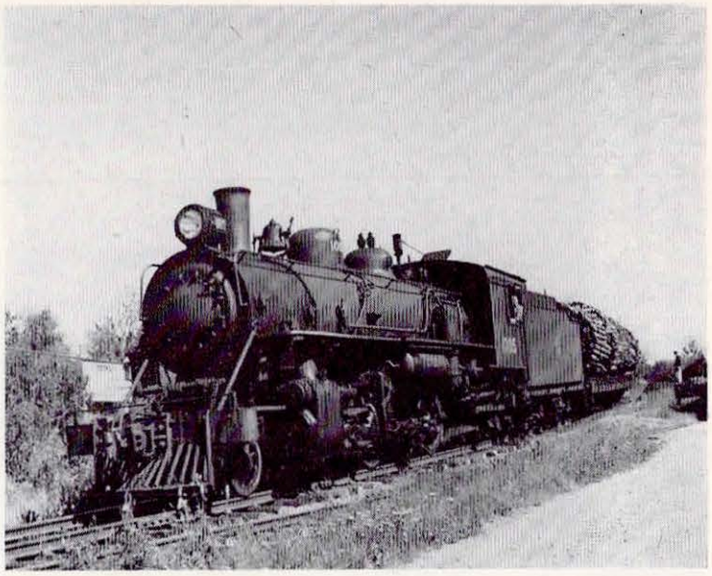
Troubled Past of Pioneer

The Newfoundland lines have had a troubled, prosperity-less past as virtually the sole transportation agency of Newfoundland outside of irregularly operated small freight boats.

A private U.S. company broke ground for the first railway in 1881, but failed after completing 60 miles of line. The English bondholders took over and



Plants like the Bowater pulp and paper mill at Corner Brook . . .



. . . absorb whole train loads of pulpwood on the narrow-gage Newfoundland lines.

completed a few more miles. Then Sir Robert G. Reid received a government contract to complete and operate the railway as originally planned; by 1897 the line had been completed from St. John's, the island's chief city, to Port-aux-Basques, its main link with the mainland, on the present location. The contract operator, Reid-Newfoundland Company, ran into serious difficulties in World War I, and in 1920 a government commission took over policy-making, with the old company still in charge of operations. In July 1923 the entire undertaking was taken over by the government, under a board of railway commissioners, and so remained through various forms of government status, until the act of union in 1949.

However old, Newfoundland is frontier country for railroaders. Its population of 300,000 lives in some 1,000 villages scattered over 44,000 sq. miles of territory (about the same as Pennsylvania). Highways are few and bad. Many villages are reached only by ship. Snow conditions are difficult and expensive. Until recent years the island has not produced enough rail traffic to support the plant necessary to provide even subsistence service.

In 1909 the Grand Falls Paper company began mill construction in Newfoundland. This was the start of interior development on an important scale. Today the mills of this company, the Buchans Mining Company and the Bowater mills at Corner Brook are the three largest industries in the province and the foundation of its economy. They could not operate without the railway.

Military and Industrial Traffic

During World War II, the importance of Newfoundland as a defense and air base for the American and Canadian forces brought traffic to the railway and money to the colony. Traffic on the line increased by some 300 per cent; earnings skyrocketed from about $3.5 million in 1939 to $11 million in 1946. From U.S. lend-lease came some $2 million for equipment and improvements for the railway, loan repayments of which have been made on schedule.

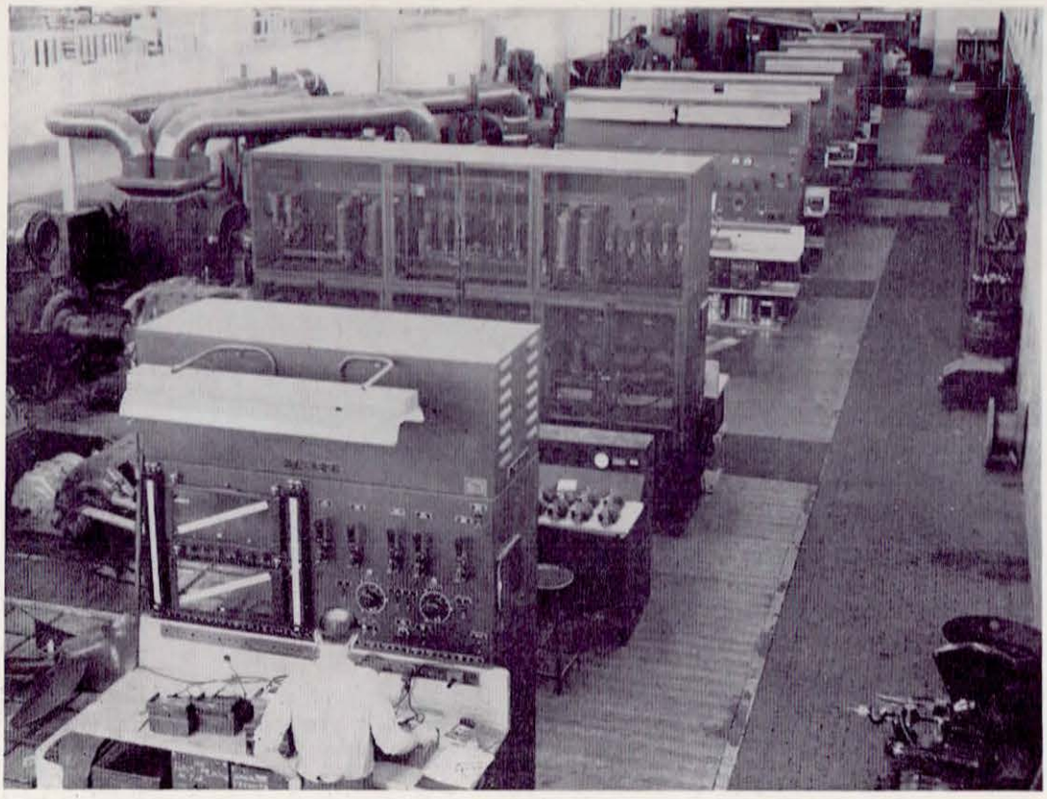
Newfoundland has a most development-conscious government. It not only works hard to attract capital, but goes ahead and builds facilities out of public funds and rents them out to likely prospects. It also loans money on favorable terms to businessmen coming from all parts of the world. This government administers Labrador, on the mainland. On the island of Newfoundland in 1951 there went into production a new birch veneer and plywood plant near St. John's, which absorbs whole trainloads of logs. Two new plants went up alongside the great Bowater pulp and paper mill at Corner Brook, on the West coast. One is a cement plant producing 100,000 tons a year. The other is a gypsum plant, turning out 200 tons of plaster and some 25,000 sq. ft. of wallboard and plaster lath per day. Pending their sale, both plants will be operated as "crown companies."

In the latter part of 1951, three more major industries got their start. This year there will go into production, under a former Czech, a new leather tannery at Carbonear, on Conception Bay. It will use local and imported hides, sheepskins, sealskins and fishskins. A new $5 million machinery plant has been erected by Canadian Machinery & Industry Construction, Ltd., at Octagon Pond, 9 miles from St. John's. United Cotton Mills, Ltd., is putting up a new plant at St. John's for making shirts, dresses and other finished goods from raw cotton which it will import and spin, weave, print and dye.

A dozen other projects are in process. They include an oil-hardening plant to process the island's seal, whale and herring oils, at Harbour Grace; a steel mill on Conception Bay to combine Bell Island (Nfld.) iron ore with Sydney (N.S.) coal; a fine leather goods industry at St. John's; a boot and shoe plant, a chemical industry; an optical industry; a glove plant; a chipboard mill; a fur dressing and dyeing industry and an aluminum products factory.

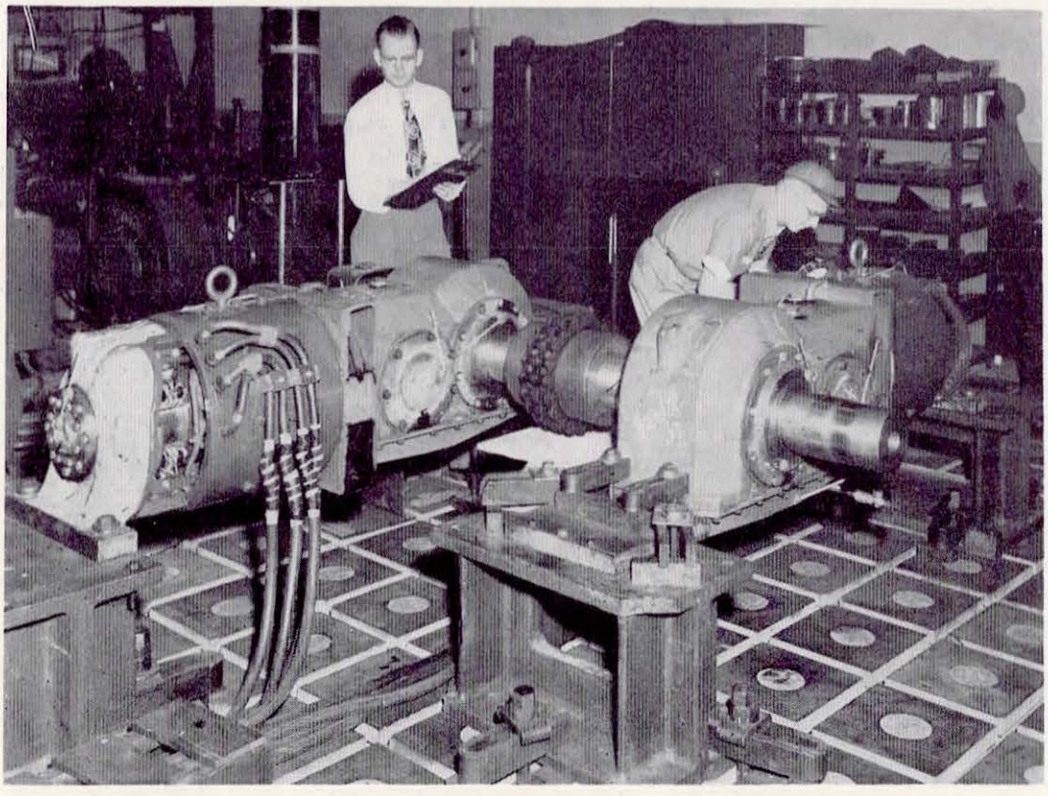
In the mining field, government and private reconnaisance is turning up, among other things, asbestos near Port-aux-Basques; copper-zinc in the Wild Cove-Twillingate area; copper in the Gull Lake, Tilt Cove and Rambler areas; and copper pyrites on Pilley's island. At York Harbour an old base metals mine is being drained and drilling begun in drifts of the old workings.

While certain of these mining developments will use water transportation for outbound movements, rail transport is essential for moving in supplies for most of them, and for handling the production of others.



A general view of the new test facility which is equipped to test traction motors and generators for locomotives beyond the size of any now being built. The 11 test tables shown are built to permit an interchange of operating personnel with a minimum of special instruction.

This New Plant...



Two test engineers conduct a load test on two double-reduction geared motors.

...Will Test Traction Motors

By accurate explorations of air flow, sound, effect of weather, life, commutation and speed-torque characteristics, it is expected that improved equipment for locomotives will be developed

A new test facility for motor engineering development has been put in service by the Locomotive and Car Equipment Department of the General Electric Company in Erie, Pa. This installation, covering 20,000 sq. ft., is equipped to test traction motors and generators for locomotives beyond the size of any now being built.

Although these facilities have existed to some degree in various parts of the works, they have now been expanded and consolidated under one roof. The new facilities comprise 11 test tables, a soundproof room for noise-making tests, an air chamber for motor ventilation tests and life-test facilities for simulating service conditions. Power is supplied from a substation covering 4,500 sq. ft. which is totally enclosed and isolated from the general testing area.

The 11 test tables were built with identical configuration of switches and controls to permit an interchange of operating personnel with a minimum of special instruction. Although each table has been designed to handle a particular type of equipment, enough flexibility was allowed so that each can be used to test other types as well. Safety features, such as dead-front switches, contactor compartment interlocks and glass-enclosed high voltage meters are incorporated.

The sound testing room, in which the sound level has been reduced to the point where it will not affect the test results, is used to investigate noise characteristics and compare various designs of equipment. To reduce the ambient sound level from 90 to 60 decibels, the room has walls insulated with rock wool. It floats on a two-foot bed of sand to isolate it from the building foundation. The roof is removable to permit use of an overhead crane.

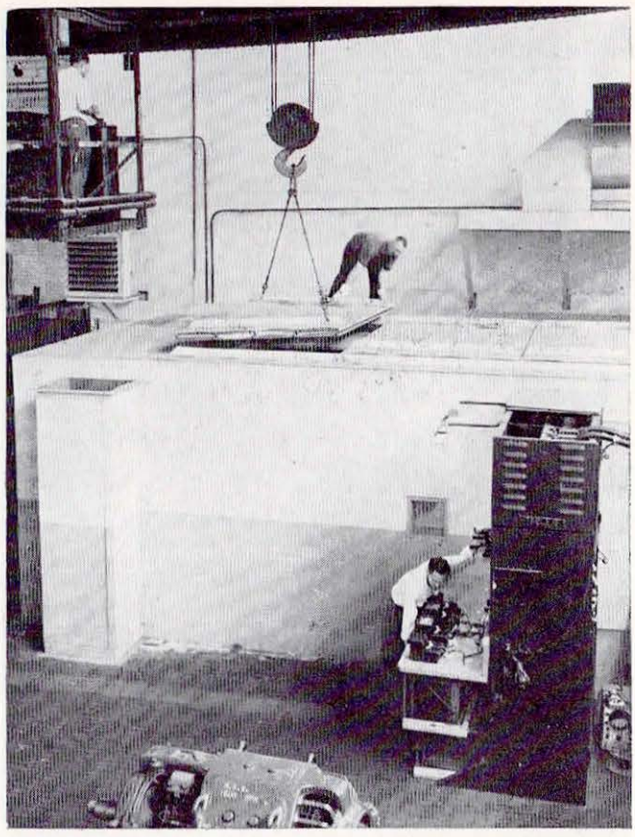
Plenum Air Chamber

A large plenum air chamber, partitioned into two ten-foot cubicles by a steel wall containing nine standard calibrated nozzles, is used to study air flow requirements for ventilating traction motors and generators and for studying the effectiveness of different fan and blower designs. The nine nozzles, made of spun aluminum, range in size from 2 to 16 in. in diameter. By opening and closing various combinations of nozzles, air flow can be accurately measured up to 30,000 cu. ft. per min.

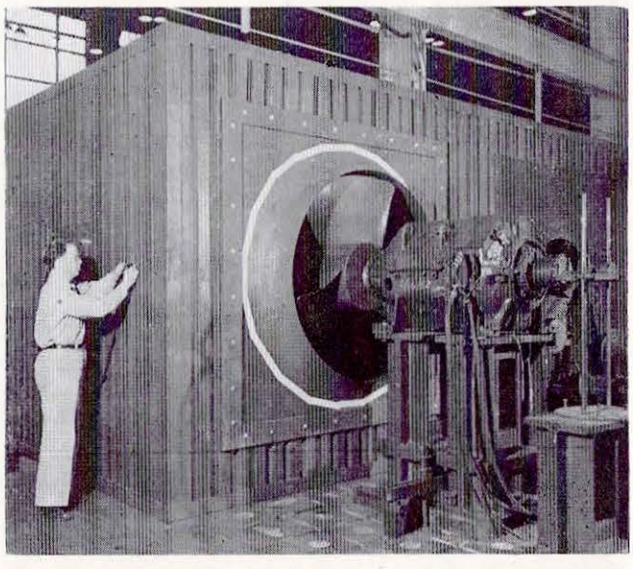
To create various conditions of intake and exhaust, large openings are provided in the front wall of each cubicle for installation of fans and test motors. The difference in static pressure between the two chambers is measured by averaging pressures from 18 different locations in each chamber. All instruments for both air flow and electrical measurements are located centrally at the test table.

The life-test facilities permit simulating actual road conditions for a wide range of equipment over varied cycles of operation. Life tests are speeded up by the use of automatic control which also permits study of fatigue and aging under operating conditions. Safety interlocks and temperature-sensitive relays protect unattended test motors. To investigate the effect of normal weather changes, motors can be tested on an outside platform.

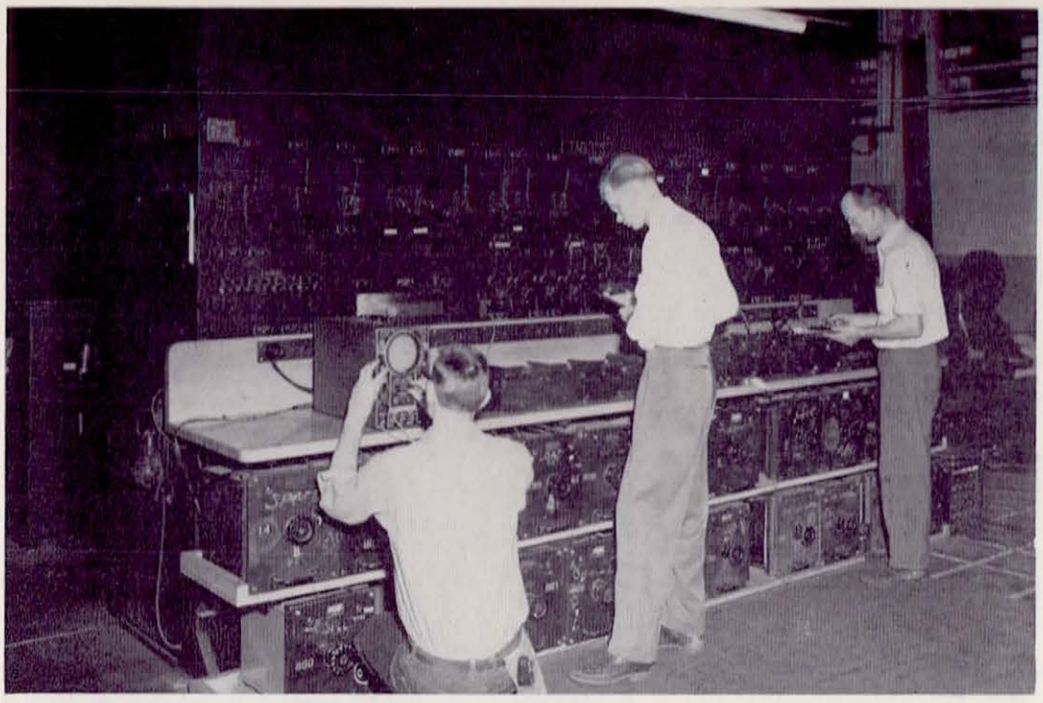
Much research will be devoted to increasing the output of traction motors and generators within the confines of the many design and size limitations inherent in locomotives. Increased output must be obtained, not by increasing the size of the equipment, but by work-



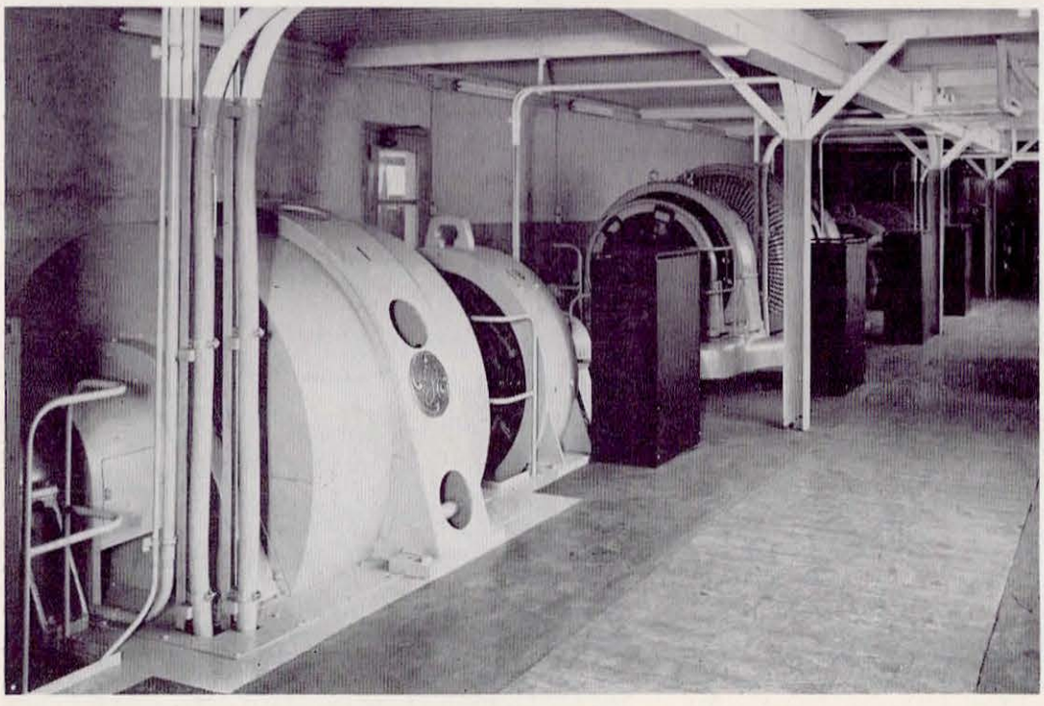
The sound room is fitted with removable roof sections to facilitate placing and removing equipment to be tested. The room has walls insulated with rock wool and floats on a two-foot bed of sand to isolate it from the building foundation.



Fans and blowers of various types are tested in this large plenum air chamber. It is capable of accurately measuring air flow up to 30,000 cu. ft. per min.



Test tables for controlling apparatus have dead-front switches and glass-enclosed high voltage meters.



Power for the new test facility is supplied by machines having a total output of 3,500 horsepower.

ing iron and copper more nearly to their limits. This causes greater heating, the effects of which will be studied through continuous heat runs.

Air-flow tests will include study into three areas: (1) Air flow versus pressure in the commutator chamber, (2) air flow versus speed of self-ventilated machines, and (3) air flow versus static heads developed at constant speeds for blowers on force-ventilated equipment.

Commutation tests will consist of varying the commutating pole flux by bucking or boosting the commutating pole field current with an external source of power. Sparking at the brushes will be measured by observation throughout the speed-load range of the equipment.

Speed-torque characteristics will be investigated by measuring generated voltage at constant speed for prescribed loads and field excitations. Constant speed can be held to within 1/8 r.p.m. accuracy with an oscilloscope trace which is produced by modulating a fixed oscillator with the output of a tachometer generator connected to the test machine.

As part of its test development program, the Locomotive and Car Equipment Department will employ young engineers as supervisors in the new motor development test. In this activity, selected men on the company's rotating test engineering program are afforded an opportunity to supervise the work of other test engineers, as well as that of permanent test men.

RAILWAY OFFICERS

(*Continued from page 18*)

FINANCIAL, LEGAL & ACCOUNTING

C. S. Morse, tax agent of the ATLANTIC COAST LINE, has been appointed tax commissioner at Wilmington, N.C. Mr. Morse entered the service of the ACL in June 1905, but resigned the next year to accept a position with the Clyde Steamship Company. He re-entered ACL service as clerk-stenographer on January 1, 1914, and subsequently served as chief clerk, assistant tax agent and tax agent, being appointed to the latter position in 1925.

Roy G. Hillebrand, assistant secretary of the SOUTHERN PACIFIC at San Francisco, has retired after 44 years of service. He has been succeeded by **Thomas F. Ryan,** chief clerk to secretary.

R. G. Gilmore and **H. N. Talbot, Jr.,** have been promoted to assistants to comptroller of the PENNSLYVANIA at Philadelphia. Mr. Gilmore was formerly assistant auditor of passenger traffic and Mr. Talbot was chief statistician at Philadelphia. **D. C. Kelly,** assistant chief claim agent at Chicago, has been advanced to chief claim agent in the office of the general claim agent at Philadelphia.

OPERATING

I. S. Clemens, assistant to superintendent of the LEHIGH & NEW ENGLAND at Pen Argyl, Pa., has been appointed trainmaster at Tadmor, Pa.

Donald L. Hart, assistant trainmaster of the DULUTH, SOUTH SHORE & ATLANTIC, has been appointed trainmaster at Marquette, Mich.

Russell A. Moebius, who has been with PACIFIC ELECTRIC at Los Angeles for 32 years, has been named general superintendent of transportation. **John D. Puffer,** who has been with PE for 18 years, has been promoted to superintendent of passenger service. **Fred C. Patton,** general superintendent of passenger service since 1948, has been assigned to special duties. **Robert W. Forcier,** with PE for 12 years, has been appointed assistant to general manager.

George W. Kerner, superintendent of dining car service of the ATCHISON, TOPEKA & SANTA FE at Chicago, has retired. He is succeeded by **Richard T. Hillyard,** assistant superintendent of dining car service.

Mr. Kerner was born and educated in Berlin, Germany. Upon coming to the United States he worked at the Waldorf-Astoria and Plaza Hotels in New York. In 1908 he entered railroad service with the Canadian Pacific, serving as dining car steward, and later as restaurant and hotel manager. In 1945 he was appointed superintendent of dining car service for the Fred Harvey organization at Chicago, and in 1946 was appointed to the position he held until his retirement.

Mr. Hillyard attended the University of Missouri and Armour Institute, entering the railroad and restaurant business in 1918 as a clerk and general office relief manager at Kansas City. After additional experience in numerous hotel eating houses and dining car positions over the Santa Fe system he was appointed terminal superintendent at Chicago in 1931. In 1947 he was named assistant superintendent of dining car service.

Charles B. Freeman has been appointed safety inspector of the ILLINOIS CENTRAL at Chicago.

E. B. Olding, acting superintendent, dining service section, of the CHESAPEAKE & OHIO, at Cincinnati, has been appointed superintendent dining car service at Ashland, Ky. **R. C. Buchanan** has been named assistant superintendent, dining service section, at Grand Rapids, Mich. **K. S. Cox** has been promoted to assistant to superintendent at Ashland.

TRAFFIC

Neil R. McCormick, general freight and passenger agent of the NEW YORK CENTRAL SYSTEM at Washington, D.C., has been appointed assistant general freight agent at Buffalo, N.Y., succeeding **George E. Taylor,** who has retired after 32 years with this road. Mr. McCormick will have jurisdiction over freight traffic solicitation in western New York, including Rochester and Corning areas, and in north-central Pennsylvania.

Herald S. Smith, district freight agent of the BALTIMORE & OHIO, has been promoted to assistant general freight agent, with headquarters as before at Cincinnati, succeeding **H. N. Bauer,** who retired recently after 45 years of service with the B&O. **H. R. McCorkel,** division freight agent at Springfield, Ill., has been transferred to Dayton, Ohio, succeeding **C. P. Mabie,** who in turn has been transferred to Cincinnati. **R. C. Loomis,** district freight representative at Kansas City, Mo., has been appointed division freight agent at Springfield, succeeding Mr. McCorkel.

E. J. Forster, general freight agent of the CHICAGO GREAT WESTERN, has been named assistant freight traffic manager at Chicago. He is succeeded by **H. O. Malm,** assistant general freight agent, who in turn is replaced by **F. K. Brennan.**

Albert C. Ziegan, general passenger agent of the SOUTHERN PACIFIC at New Orleans, will retire on December 31 after 47 years of service. He will be succeeded by **Frank V. Schaub,** assistant general passenger agent at New Orleans. **Earl Gillett** has been named assistant general passenger agent at San Antonio, Tex.; **J. R. McIntyre,** district passenger agent at New Orleans; and **Murray Songer,** district passenger agent at Beaumont, Tex.

Mr. Ziegan started his rail career as a stenographer for the SP at New Orleans in 1905. Two years later he transferred to the passenger traffic department and served as rate clerk, chief clerk and district passenger agent. In 1943 he was promoted to general passenger agent.

Dwight L. McCaughan, general agent of the MINNEAPOLIS & ST. LOUIS at Spokane, Wash., has been promoted to assistant freight traffic manager at Des Moines, Iowa, succeeding **Clyde E. Hill,** who has been appointed special representative at that point. **Gilbert A. Scriven,** general agent at Great Falls, Mont., succeeds Mr. McCaughan as general agent at Spokane, and **Robert W. Christie,** commercial agent at Des Moines, becomes general agent at Great Falls.

Ernest S. Hughes, Jr., commercial agent of the SOUTHERN at Montgomery, Ala., has been promoted to district freight and passenger agent at Minneapolis, Minn. **Charles S. Stagg,** commercial agent at San Francisco, has been promoted to general agent, freight and passenger departments, to head a new office in the Joseph Vance building, Seattle, Wash.

S. R. Harris has been appointed assistant to traffic manager of the CHARLESTON & WESTERN CAROLINA at Augusta, Ga., and **Bythel Warrell** has been named general agent at Charleston, S.C.

J. P. New, general agent of the CHICAGO & EASTERN ILLINOIS at Milwaukee, has retired. He has been succeeded by **M. L. Rumpf.**

Louis G. Weber, assistant general passenger agent of the SEABOARD AIR LINE, has been promoted to general passenger agent, with headquarters as before at New York, succeeding **Herman T. Denning,** who has been transferred to Jacksonville, Fla., to replace **J. R. Bradley, Jr.,** deceased. **V. T. Boatwright, Jr.,** division passenger agent at Norfolk, Va., has been promoted to assistant general passenger agent at New York, to succeed Mr. Weber. **Paul W. Harris,** district passenger agent at Tampa, Fla., succeeds Mr. Boatwright as division passenger agent at Norfolk. **J. F. Thomas, Jr.,** assistant general passenger agent at Jacksonville, has been transferred to Tampa. **Floyd H. Bradley,** traveling passenger agent at Miami, has been promoted to assistant general passenger agent at Jacksonville.

Mr. Weber began his career in railroad passenger work with other lines in New York in 1912 and became associated with the Seaboard in 1939 as

city passenger agent at New York. He was named eastern passenger agent in 1945 and became assistant general passenger agent in May 1947.

Edgar P. Cilley has been appointed assistant general freight agent (rates) of the NICKEL PLATE at Cleveland. The position of executive clerk to assistant vice-president—traffic (rates) has been abolished.

The ST. LOUIS-SAN FRANCISCO has opened a traffic office in the National Bank building, Lubbock, Tex. **Howard B. Blagg** heads the office as general agent.

F. H. Draeger has been appointed assistant general freight agent of the CHICAGO & EASTERN ILLINOIS.

A. F. Knauer has been appointed general agent, passenger department, of the CANADIAN NATIONAL, succeeding **J. E. Myers.**

PURCHASES & STORES

Frank J. Loughlin, assistant purchasing agent of the ERIE, has been appointed purchasing agent. Mr. Loughlin will have headquarters as before at Cleveland. He succeeds **Thomas E. Savage,** who has retired under the pension rules of the company, in his 50th year of continuous service in the purchasing department of the Erie. **John Tapping,** assistant to purchasing agent, has been appointed assistant purchasing agent and **Edward A. Murphy** becomes assistant to purchasing agent.

Frank J. Loughlin

Mr. Savage was born at Passaic, N.J., on November 26, 1887, and entered railroad service in August 1903 in the purchasing department of the Erie. During World War I he served with the United States Army.

Mr. Loughlin was born at Jersey City, N.J., on April 2, 1890, and entered railroad service on September 6, 1904, as messenger in the telegraph department of the Erie. He later served as clerk and chief clerk in the purchasing department, becoming assistant to purchasing agent in July 1939 and assistant purchasing agent in December 1939.

Mr. Tapping was born on November 25, 1903, at Harriman, N.Y., and entered railroad service on September 1, 1920, as messenger and clerk for the Erie. After serving successively as tracing and order clerk in the purchasing department at New York, and as quotation and price clerk at Cleveland, he was appointed assistant to purchasing agent at Cleveland on December 1, 1939.

MECHANICAL

W. P. Chesney, electrical foreman of the CHESAPEAKE & OHIO, has been named electrical engineer of the Pere Marquette district at Grand Rapids, Mich. He succeeds **W. C. Cox,** who has retired. Mr. Cox entered railway service in 1914 with the Pere Marquette as an electrician. In 1915 he became car lighting engineer at Bay City, Mich. Three years later he was named electrical foreman. After six months he was again promoted, this time to powerhouse engineer. In 1950 he was appointed electrical engineer.

W. P. Chesney

Mr. Chesney began his railway career with the PM in 1918 as a car lighting electrician at Bay City. In 1922 he became associated with the Robert Gage Coal Company at St. Charles, Mich., but four years later returned to the PM as road electrician at Saginaw. In 1941 he was promoted to electrical inspector and in 1944 became electrical foreman at Grand Rapids. He held this last position until his recent appointment as electrical engineer.

W. C. Barrer, superintendent car department of the CHICAGO & NORTH WESTERN, has been named assistant superintendent of car shops at Chicago. **C. P. Nelson,** assistant superintendent of car shops, has been named general supervisor air conditioning at Chicago. **E. F. Iverson** has become district supervisor car maintenance of the Wisconsin (except Chicago terminal district), Madison, Dakota, Lake Shore, Ashland, and Peninsula divisions, with headquarters at Chicago.

H. G. Cronnoble succeeds **H. H. Thomas,** who has retired as master mechanic at Green Bay, Wis. **J. L. Reed** has been appointed master mechanic at St. Paul, succeeding Mr. Cronnoble.

W. J. Strout, chief engineer and acting mechanical superintendent of the BANGOR & AROOSTOOK at Houlton, Me., has been appointed chief engineer and mechanical superintendent.

OBITUARY

John W. Reed, assistant engineer, Western region, of the PENNSLYVANIA, died on December 3 at Chicago.

John S. Bannon, retired assistant personnel officer of the CHICAGO & NORTH WESTERN, died on November 20 at Chicago.

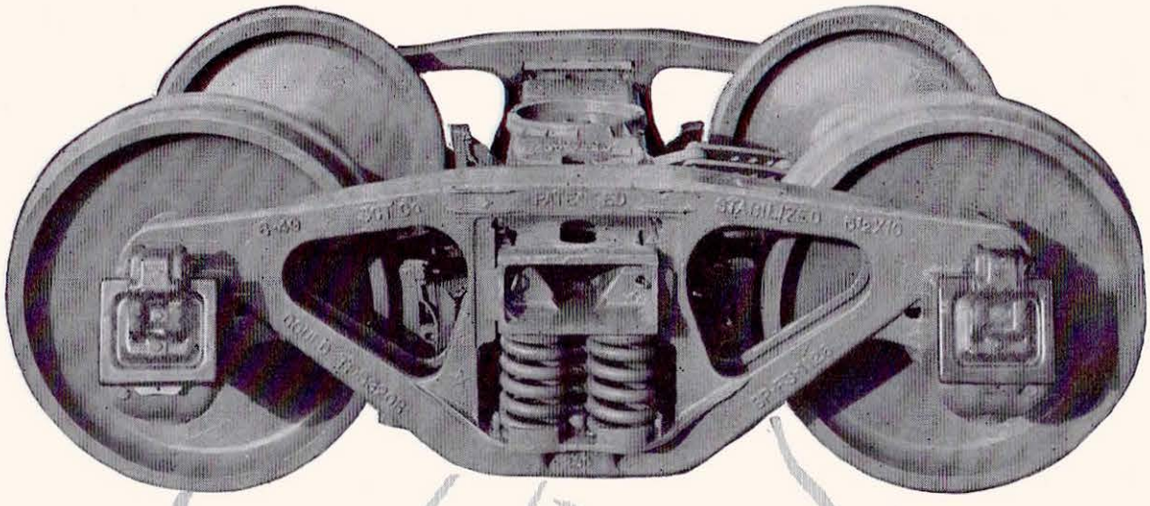
William L. Kelly, assistant auditor of disbursements of the ILLINOIS CENTRAL, died on December 3 at Chicago.

John P. Kilty, general manager of mail, baggage and express for the CHICAGO, ROCK ISLAND & PACIFIC, died on November 29 in Chicago.

J. M. Prickett, 65, who retired in February as vice-president of the KANSAS CITY SOUTHERN, died on December 6 at his home in Kansas City. A photograph and biography of Mr. Prickett were published in *Railway Age* March 17, pages 119 and 120.

George P. Butcher, general storekeeper of the NORFOLK & WESTERN at Roanoke, Va., died recently. Mr. Butcher was born at Hampden Sydney, Va., and joined the N&W as a clerk in the Roanoke shops in September 1907. Two years later he transferred to the supply department and was promoted to assistant storekeeper in December 1919, advancing to general foreman of stores in August 1927, assistant general storekeeper in June 1940, and general storekeeper in January 1950.

Claude B. Matthai, general solicitor of the UNION PACIFIC, died on November 24 at Linwood, Neb. Mr. Matthai began his railroad career as a clerk in the division freight office of the Burlington at Council Bluffs in 1900, joining the UP as a stenographer in the law department in 1902. Seven years later he became chief clerk in that department. While serving in that capacity he attended Creighton University night law school, and was admitted to practice in 1914. From 1917 to 1932 he was an attorney for the UP, and from 1921 served concurrently as assistant secretary of system lines. In 1932 he became assistant general attorney and in 1935 general attorney. Seven years later he became assistant general solicitor, and was appointed general solicitor in 1949.



BARBER

STABILIZED TRUCK

takes them all (LIGHT LOADS / MEDIUM LOADS / HEAVY LOADS) in its stride

Thanks to Variable Friction

All loads "look alike" to Barber Stabilized Trucks; they are designed to adapt themselves to all conditions encountered in freight service. The patented variable pressure of the friction elements automatically adjusts itself to all loadings, from empty to maximum—and to all speeds.

In addition, Barber *Side* Springs carry part of the load, increasing capacity.

These facts are proved by Test Data—and by Analysis of Savings in damage claims on Barber-equipped cars.

Over 315,000 car sets of Barber Stabilized Trucks have been specified.

5910RR

STANDARD CAR TRUCK COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

GENERAL NEWS

(*Continued from page 15*)
tices which violate recently enacted amendments to the Civil Aeronautics Act. A board statement said that in view of "apparent continuing violations," the C.A.B. is preparing to undertake appropriate enforcement action in a number of cases.

Complaints from the public, and other information, indicate a large number of ticket agents engaged in the sale of air transportation have persisted in unlawful practices, the statement said. It went on to ask that all agents "review their practices and activities and effect immediately all corrective action necessary to achieve full compliance."

The statement contained 13 examples of what the board called "deceptive practices or unfair methods of competition." These were included "for the guidance of all concerned." The recent amendments to the Civil Aeronautics Act made ticket agents as well as air carriers subject to provisions on unfair practices, rebating, and other rate-cutting devices.

Briefly . . .

. . . "Santa Claus tickets"—a 15-cent round trip from any station in suburban territory to downtown Chicago—have been offered by the Chicago & North Western for travel on the five Saturdays before Christmas. The plan, which was started two years ago and which this year is being offered for a more extended period, applies to all children from five to 12 years of age who are accompanied by an adult. A normal half-fare round trip from the most distant suburban point on the system, Williams Bay, Wis., is $2.02. The tickets are not sold on trains and in cases where agencies are closed on Saturday, they must be purchased in advance.

. . . The Canadian National has lodged a $250,000 damage claim against the Lakeshore Construction Company, general contractors of Pointe Claire, Que., whose trailer truck derailed a CNR passenger train near Valois Station outside Montreal on November 18. Donald Gordon, CNR chairman and president, said there is a large amount of eye-witness testimony that the driver drove his truck into the path of the approaching train despite the fact automatic warning signals were working, the train was clearly visible and the whistle blowing.

. . . Another link in the Western Pacific's centralized traffic control system was opened on November 14, when C.T.C. jurisdiction was extended eastward from Wendover, Utah, to Delle, about 70 miles. The project, now 94 per cent complete, will ultimately cover the entire main line from Oakland, Cal., to Salt Lake City.

. . . The Rock Island has marked some 200 freight cars with distinctive "Scotchlite" reflective markings to boost nighttime visibility. All the road's passenger cars and diesel freight locomotives have already been so treated and the road's safety program calls for all switching locomotives to receive this treatment next.

I.C.C. Advised to O.K. MP, SP Fare Increases

Examiner A. T. Palmer has recommended in a proposed report that the Interstate Commerce Commission approve the 10 per cent increase in passenger fares which is being sought by the Missouri Pacific and Southern Pacific and their affiliates.

The proceeding is docketed as No. 31050. The application was filed more than seven months ago. (*Railway Age*, May 12, page 77.)

"Who Is Going to Pay?" Grotz Asks Auto Club

Organized motorists and automobile associations can "exert their wise influence in shaping road programs required by 99 per cent of motor vehicles, well within the bounds of a sound governmental fiscal policy," W. Arthur Grotz, president of the Western Maryland, told the Automobile Club of Maryland in a recent address at Baltimore.

The railroads, Mr. Grotz said in part, do not seek to impose unfair restrictions on trucks; their objective is limited to "open competition between all modes of transportation on equal terms." Neither, he added, are railroads or railroad people opposed to adequate roads. But "we distinguish between the desirability of improvement of thousands of miles of roads on the one hand, and the concentration of attention on a relatively few miles of extremely expensive multi-lane highways, on the other . . . the latter designed expressly to permit highway trailers to operate side by side and with those easy grades which would permit minimum-powered diesel tractors to speed with freight car loads."

"A clever name," the WM chief executive continued, "has been given to a nationwide advertising campaign for super-highways. The name is PAR —Project Adequate Roads. With apparently unlimited advertising budgets and imagination, this program has developed, in the minds of some, into requiring national expenditures of about $7 billion a year for 15 years, or $105 billion . . . These figures would seem like fantastic dreams if it were not for the seductive power of modern propaganda on the masses of partially informed voters . . . Everybody is in favor of adequate roads [just as] everybody is against sin. It is the implementing of the campaign with specific projects by those having a private axe to grind that may catch the great majority of the voters inadequately informed. It is the question, 'Who is going to pay—and how?' that requires thought."

Motor Carriers Must File Data on Driver Hours, Pay

Class I truckers and bus operators have been ordered by the Interstate Commerce Commission to include data on man-hours paid for and compensation of drivers in their quarterly reports to the commission. The requirement becomes effective with returns for the first quarter of 1953.

Bangor & Aroostook Issues New Magazine

"Maine Line," a new magazine, 5 in. by 7 in. in size, is now being published monthly by the Bangor & Aroostook for distribution to all its employees, active, retired and in military service.

The first issue, dated November-December, consists of 40 pages; the leading article describes the 507 heater-refrigerator cars being built for the B&A by the Pacific Car & Foundry Co. Publication is under direction of the railroad's personnel and public relations department, with Kenneth S. Ludden and Richard W. Sprague as editor and assistant editor, respectively.

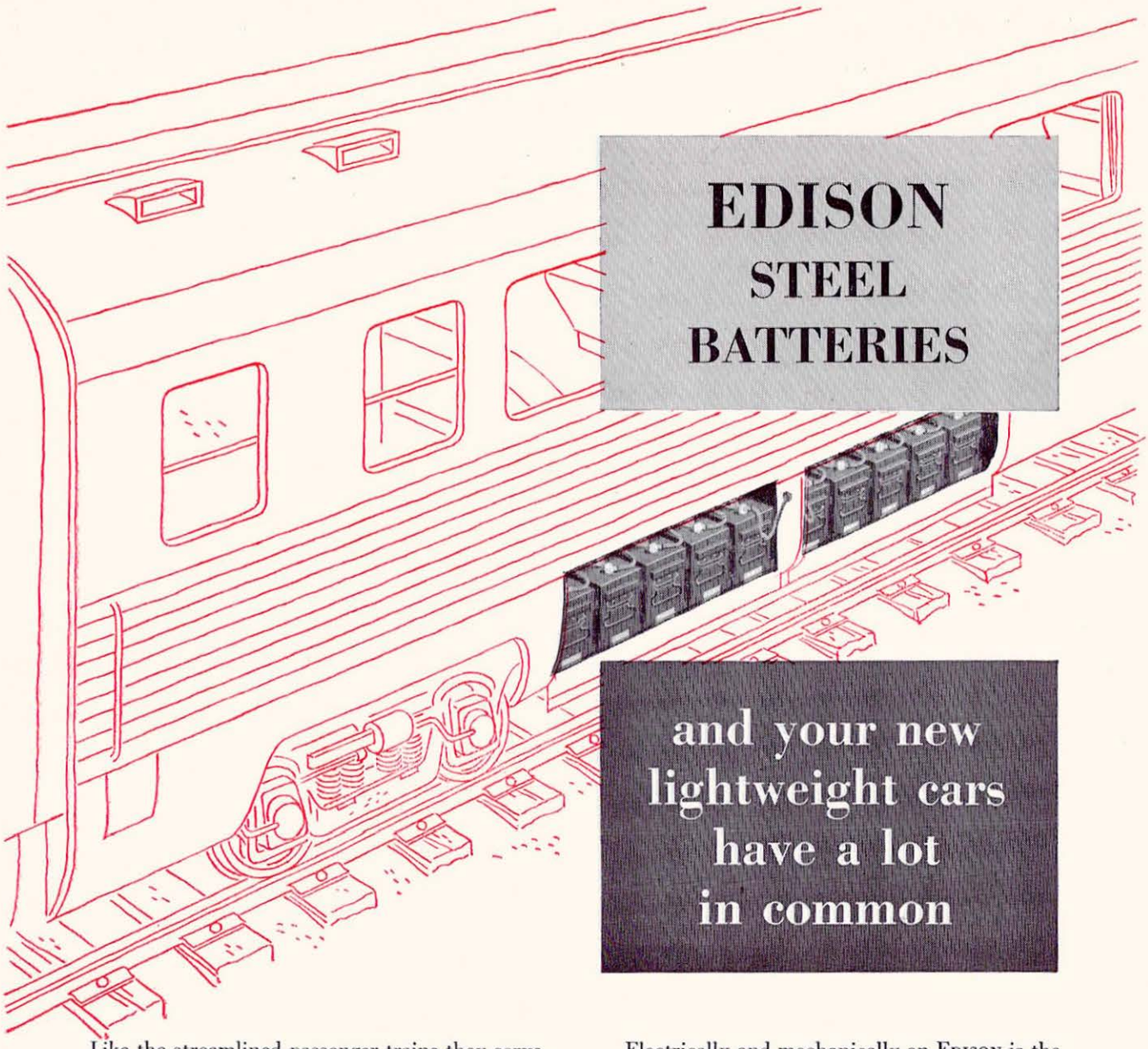
Erie Opens Corning Track Relocation

What is said to be one of the largest railroad relocation projects ever completed in New York state, was recently opened by the Erie in Corning, N.Y.

The project, costing in the neighborhood of $12 million, involved construction of a new seven-mile railroad line through the north part of the city, construction of new passenger and freight stations, and erection of 21 major structures for separation of street and railroad grades and for crossing streams; all told, the new line eliminates 25 grade crossings, 19 of them on the Erie. Approximately two million cubic yards of embankment were required.

Farmer "Picks Up Check" For Regulation—Mackie

The American farmer picks up the check for expenses incurred by American railroads in complying with a long list of burdensome and unnecessary regulations. That was the message given by David I. Mackie, vice-president and general counsel of the Delaware, Lackawanna & Western, to the 44th annual meeting of the Vegetable



EDISON STEEL BATTERIES

and your new lightweight cars have a lot in common

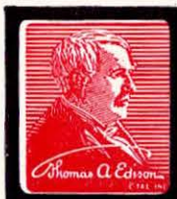
Like the streamlined passenger trains they serve, EDISON batteries are amazingly strong *yet unusually light*. Inside and out, each cell is made of steel. Result is the strongest cell construction known . . . plus a weight saving up to 2,000 pounds per car.

Electrically, too, they're unique. There are no finish-rate limitations. Recovery after every interval of discharge can be just as rapid as generator output permits. Result: high road capacity . . . seldom any need for yard charging. They have no discharge limits; will operate self-regulating inversion equipment correspondingly longer in emergencies.

What's more, overcharging, over-discharging, even accidental reverse-charging or short circuiting can't harm them.

Electrically and mechanically an EDISON is the *most dependable* battery you can buy. Add to this a service life so long that it results in the lowest over-all cost of operation. For more facts, send for Bulletin SB 3802; see your Edison field engineer.

Most Dependable Power—
Lowest Over-all Cost . . .
***you get both with an* EDISON**



EDISON
Nickel • Iron • Alkaline
STORAGE BATTERIES
Edison Storage Battery Division of
Thomas A. Edison Incorporated, West Orange, N. J.

Growers Association of America at Tampa, Fla., on December 2.

"We are not asking that our . . . competition be restricted," he explained. But, he continued: "We want the rate adjustment procedure speeded up. . . . We ask that the law be changed to give the Interstate Commerce Commission the right of review in local cases [of service curtailment]. . . . We ask that the rate determining policy of the I.C.C. be changed from one of guessing price effect upon business volume to one based upon creating earnings that will permit the railroads to live in economic health in a free enterprise system."

In closing, Mr. Mackie reminded his farm audience that railroads were the first great industry to be regulated, the first to be seized, and could be expected to be the first to be socialized—if government regulations were to continue, to bring about its economic death; repeated that the railroads ask only a "fair break" with competing forms of transportation; and warned that the nation would never be strong in peace or war without the "great iron carriers."

Three Railroads Join as Hosts to Teachers

The three major railroads serving the San Francisco Bay area were joint hosts to a large group of San Francisco public school teachers on Business Education Day, November 21. This is an annual event arranged by the Chamber of Commerce and the San Francisco Board of Education, in which major industries of all types sponsor tours of their establishments and give outlines of business procedure.

Accompanied by officers of the three railroads, the tour began at the Santa Fe passenger terminal in San Francisco, and went by Santa Fe motor coach to the company's new freight terminal and tug and barge operation at China Basin. A Southern Pacific ferry boat took the group across the bay for an inspection of the SP diesel shops and a demonstration ride, including train washing, in the Western Pacific yard, where luncheon was served aboard two WP dining cars. Back in San Francisco, officers of the three railroads met in the SP general offices and conducted a panel session on 12 phases of railroad operation for the benefit of the assembled visitors, each of whom was given a packet of informative material relating to the industry.

NP Traffic Men Hear Industrial Sales Managers

About 150 Northern Pacific traffic representatives came from offices in 21 states and three Canadian provinces to attend a sales meeting in St. Paul on December 4 and 5.

An unusual feature of this meeting was the inclusion of outside speakers. William H. Gove, sales development manager of the Minnesota Mining & Manufacturing Co.'s cellophane tape sales department, and Edward A. Cashin, vice-president and Minneapolis manager of Batten, Barton, Durstine & Osborne, advertising agents, both spoke on salesmanship.

Williston basin oil developments and their effect on the NP were outlined by LeRoy H. Hines, vice-president in charge of the road's oil development department. The two-day meeting concluded at a dinner at which President Robert S. Macfarlane outlined company plans for 1953.

1952's 2nd Quarter Loading Estimate Was 13.2% High

The 13 Regional Shippers Advisory Boards overestimated car loadings for the second quarter of 1952 by 13.2 per cent, according to the latest comparison of forecasts with actual loadings. Chairman A. H. Gass of the Car Service Division, Association of American Railroads, issued the comparison.

Mr. Gass reported that each of the 13 boards overestimated second-quarter loadings. Highest error was an overestimate of 29.6 per cent. One board's overestimate was 0.3 per cent, and this was the best showing among the group.

The boards overestimated loadings in 21 of the 32 commodity groups, and underestimated loadings in 11 groups. The range was from an overestimate of 33.2 per cent for ore and concentrates, to an underestimate of 44.5 per cent on cotton. A 44.5 per cent underestimate also was made in the "frozen foods, fruits and vegetables" group.

In addition to that on ore and concentrates, the shipper boards overestimated loadings on iron and steel by 29.7 per cent; coal and coke by 15.6 per cent; brick and clay products by 14.7 per cent; paper, paper board and prepared roofing by 14.3 per cent, and chemicals and explosives by 11.6 per cent.

The range of underestimates by commodities was from 0.3 per cent for "cotton seed, soybean-vegetable cake and meal, excluding oil," to the 44.5 per cent on cotton and "frozen foods." There was a 7.9 per cent underestimate on poultry and dairy products, and a 7.6 underestimate on both "automobiles and trucks" and "fertilizers, all kinds."

COMPARISON: ESTIMATED NATIONAL FORECAST, REGIONAL SHIPPERS ADVISORY BOARDS, WITH ACTUAL CARLOADINGS, SECOND QUARTER 1952

BOARD	Carloadings Second Quarter 1952 Estimated	Actual	Percentage of Accuracy Over Est'd.	Under Est'd.
Central Western	237,612	204,852	13.8	
Pacific Coast	382,942	378,783	1.1	
Pacific Northwest	262,316	233,901	10.8	
Great Lakes	661,480	540,105	18.3	
Ohio Valley	1,006,989	894,325	11.2	
Midwest	874,769	758,526	13.3	
Northwest	766,766	540,105	29.6	
Trans-Mo-Kansas	363,211	362,060	0.3	
Southeast	1,060,955	1,018,135	4.0	
Southwest	503,471	501,174	.0.5	
New England	122,832	106,638	13.2	
Atlantic States	848,534	742,212	12.5	
Allegheny	1,054,846	787,771	25.3	
Totals	8,146,723	7.068,587	13.2%	00.0%

Railroad Fined

The Interstate Commerce Commission has been advised that on November 17, in the U.S. District Court at Asheville, N.C., the Southern and its trainmaster, Shepard S. Lewis, "each pleaded *nolo contendere* to a joint information in two counts, and were fined $5,000 and $100, respectively."

Acting Secretary George W. Laird of the I.C.C. said in a December 3 "memorandum for the press" that the Southern and its trainmaster were charged with violating Section 20(7) (b) of the Interstate Commerce Act through the making of false entries in records kept by the railroad.

Waybill Studies

Additional waybill studies issued by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, include:

Statement No. 5246, Mileage Block Distribution of Traffic and Revenue, by Commodity Class, Territorial Movement and Type of Rate, Manufactures and Miscellaneous and Forwarder Traffic (C.L.)—All Terminations in 1951.

What About Lean Years? Atkinson Asks T-M-K Board

Despite a decade of peak transportation, the railroads, since 1940, have averaged a return on net investment of only 4½ per cent, Arthur K. Atkinson, president of the Wabash, told the Trans-Missouri-Kansas Shippers Board in St. Louis on December 4. Public utilities, he pointed out, customarily earn twice that much, and manufacturers average four times that figure.

"Such a record has prevented any possibility of obtaining equity financing to pay for expansion of rail facilities. It keeps the railroads from setting aside reserves for any lean years . . . We sincerely believe our record of improved performance without a proportionate increase in earnings conclusively proves the existence of basic faults in the regulatory law and its administration. These faults are beyond our control and can be cured only by congressional action supported by an understanding public."

Mr. Atkinson called upon Congress for:

(*Continued on page* 74)

Township Thanks Railroad

The Fairport, Painesville & Eastern Railroad Company received the following letter from the Board of Trustees of Painesville Township, Ohio:

Gentlemen:

The attention of the Board of Trustees of Painesville Township has been called to the condition of the various railroad crossings in Painesville Township. Their inspection has resulted in a motion passed by the Painesville Township Trustees at their meeting Sept. 13, 1951, formally instructing the Clerk to write a letter to the officials of the Fairport, Painesville & Eastern Railroad, thanking them for their efforts to keep their crossings improved and in safe condition for traffic. Your cooperation merits the appreciation which this letter tries to convey to the officials and others responsible.

Respectfully yours,
Philip W. Baker
Clerk

FOR KOPPERS PANEL CROSSINGS

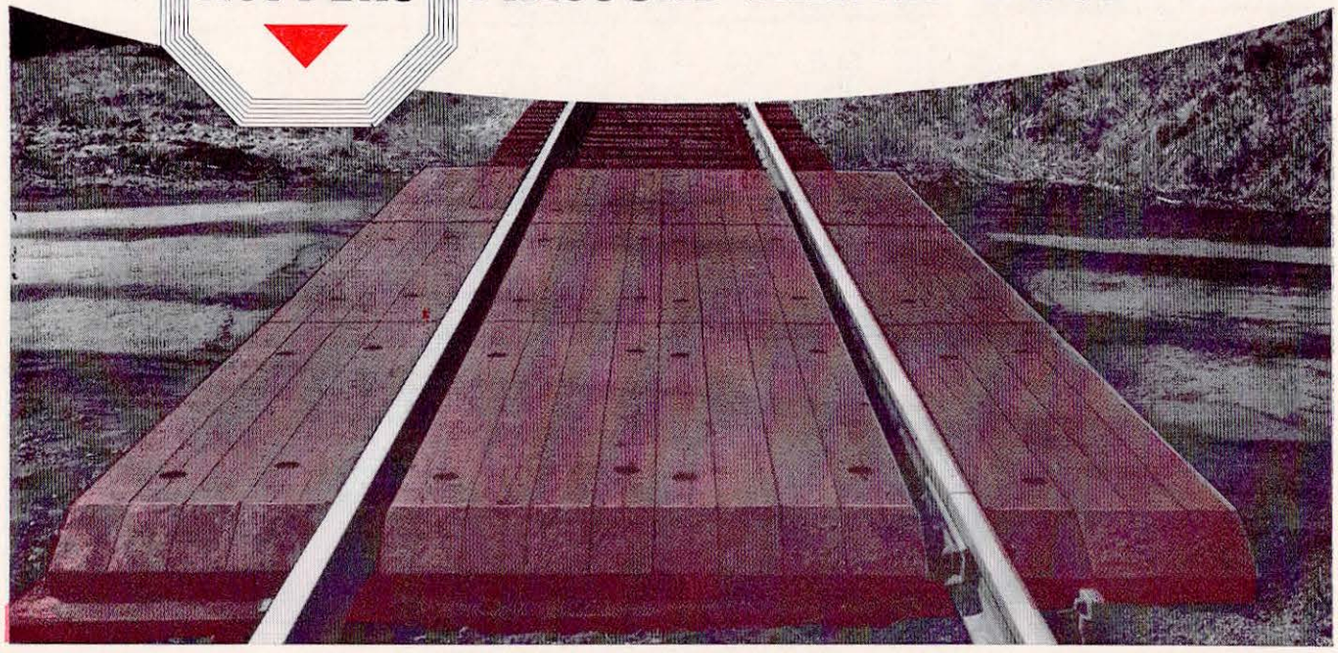
The F. P. & E. R.R. Co. wrote us that " . . . all of the crossings referred to were supplied by Koppers. In March, 1948, we purchased our first Koppers Pressure-Creosoted Panel Grade Crossings and subsequently have purchased 15 more. All of these crossings are giving us excellent service. That they are equally satisfactory to the public agencies responsible for road conditions is indicated by the letter from the Township Trustees."

Koppers Creosoted Grade Crossings are made to last. The panel method of construction offers easy installation. Completely assembled individual panels are securely fastened to withstand vibration, swelling or shrinking of the wood. When the track is worked, the crossings may be removed and replaced, using all the original material.

Write for a copy of the new folder on KOPPERS GRADE CROSSINGS. It contains construction details and technical data on crossings that not only save money but also earn public applause for doing a good job.

KOPPERS COMPANY, INC. · Pittsburgh 19, Pa.

KOPPERS PRESSURE-TREATED WOOD



Freight Operating Statistics of Large Railways — Selected Items

Region, Road and Year		Miles of road operated	Train-miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-Miles (thousands): Gross excl.locos. & tenders	Ton-Miles (thousands): Net rev. and non-rev.	Road-locos. on lines: Serviceable: Unstored	Road-locos. on lines: Serviceable: Stored	Road-locos. on lines: B.O.	Road-locos. on lines: Per Cent B.O.
New Eng. Region	Boston & Maine	1952	1,690	246,472	253,206	11,526	9,362	70.7	584,328	251,099	79	11	11	10.9
		1951	1,690	242,745	250,523	13,071	9,537	72.4	588,538	259,974	83	5	14	13.7
	N. Y., N. H. & Htfd.	1952	1,765	286,849	286,927	18,048	11,472	71.2	701,817	310,192	100	..	2	2.0
		1951	1,766	272,508	273,107	18,853	10,802	71.0	659,602	290,261	96	..	6	5.9
Great Lakes Region	Delaware & Hudson	1952	793	215,962	226,000	8,708	10,455	74.5	717,967	390,488	69	58	11	8.0
		1951	793	237,877	276,181	20,924	10,745	75.4	739,241	412,763	113	18	15	10.3
	Del., Lack. & Western	1952	962	272,079	288,083	26,074	13,119	72.0	854,196	404,166	74	5	2	2.5
		1951	964	266,285	284,813	27,429	12,329	72.0	798,939	374,319	78	11	10	10.1
	Erie	1952	2,242	614,445	621,270	32,591	35,570	69.7	2,228,212	928,871	181	5	2	1.1
		1951	2,243	623,160	633,796	37,377	34,867	66.9	2,235,172	910,240	174	26	14	6.5
	Grand Trunk Western	1952	952	241,357	248,195	2,198	8,550	66.1	570,511	249,890	60	..	12	16.7
		1951	952	255,674	262,395	2,348	8,630	65.2	589,057	260,119	56	1	14	19.7
	Lehigh Valley	1952	1,206	229,319	234,073	10,975	11,530	73.6	770,349	384,654	35	..	..	..
		1951	1,211	237,409	248,661	19,381	12,288	72.3	813,672	396,061	44	5	5	9.3
	New York Central	1952	10,668	2,683,236	2,761,230	116,807	107,673	64.4	7,633,629	3,563,473	783	103	215	19.5
		1951	10,675	2,887,010	3,031,128	159,129	110,482	63.5	7,890,332	3,616,060	891	127	416	29.0
	New York, Chic. & St. L.	1952	2,160	762,601	792,093	9,483	31,219	69.7	2,186,077	1,036,317	194	4	46	18.9
		1951	2,161	755,919	780,249	6,607	30,758	66.7	2,140,844	998,496	202	15	38	14.9
	Pitts. & Lake Erie	1952	221	73,052	75,180	32	3,756	74.4	312,590	201,407	39	4	11	20.4
		1951	221	86,506	88,634	70	3,658	73.2	296,345	185,209	25	3	20	41.7
	Wabash	1952	2,381	511,094	515,708	8,506	22,486	70.7	1,414,473	602,611	110	30	38	21.3
		1951	2,381	507,425	512,634	7,986	21,911	72.0	1,377,674	609,864	122	15	41	23.9
Central Eastern Region	Baltimore & Ohio	1952	6,082	1,628,335	1,846,866	192,017	68,649	65.6	5,201,925	2,655,219	534	37	184	24.4
		1951	6,083	1,716,367	1,999,638	233,067	69,775	64.9	5,274,581	2,664,867	632	74	191	21.3
	Central of New Jersey	1952	411	71,701	72,387	4,122	2,871	68.3	213,318	112,969	23	..	1	4.2
		1951	412	70,835	71,182	3,673	2,938	67.9	211,751	112,575	42	..	4	8.7
	Central of Pennsylvania	1952	207	62,220	67,148	8,394	2,702	71.0	196,322	108,078	31	2	4	10.8
		1951	210	67,212	74,527	12,686	2,600	71.0	189,740	103,778	32	1	6	15.4
	Chicago & Eastern Ill.	1952	868	127,880	127,880	2,939	5,449	69.5	366,024	182,306	29	..	2	6.5
		1951	886	128,074	128,074	3,646	5,092	70.1	335,863	165,950	27	..	3	10.0
	Elgin, Joliet & Eastern	1952	236	94,175	95,688	966	3,704	66.8	295,469	164,960	39	..	3	7.1
		1951	238	103,654	104,536	958	4,231	66.3	342,726	193,364	43	..	..	..
	Pennsylvania System	1952	9,961	2,991,721	3,227,345	312,406	134,299	69.6	9,438,522	4,803,830	1,035	74	342	23.6
		1951	10,045	3,116,660	3,388,436	368,324	137,287	67.5	9,771,130	4,956,351	1,142	101	353	22.1
	Reading	1952	1,318	347,709	353,433	22,333	14,036	68.8	1,084,667	601,476	159	16	22	11.2
		1951	1,311	366,402	378,177	25,490	13,370	67.5	1,039,648	371,417	171	31	35	14.8
	Western Maryland	1952	836	185,758	218,049	27,053	6,631	67.3	532,021	307,747	126	5	10	7.1
		1951	837	175,398	208,895	24,813	6,286	65.3	505,970	284,234	124	8	19	12.6
Pocahontas Region	Chesapeake & Ohio	1952	5,036	1,342,191	1,391,149	46,440	65,460	58.1	5,703,761	3,223,193	433	63	179	26.5
		1951	5,043	1,491,234	1,575,336	69,616	69,845	56.7	6,179,422	3,473,207	501	7	242	32.3
	Norfolk & Western	1952	2,113	719,732	763,003	53,386	34,395	58.8	3,094,973	1,693,925	225	33	22	7.9
		1951	2,113	773,980	828,964	66,033	36,938	59.1	3,315,000	1,825,071	244	12	20	7.2
Southern Region	Atlantic Coast Line	1952	5,460	747,524	747,557	7,789	23,059	61.8	1,663,061	784,148	267	16	33	10.4
		1951	5,434	702,426	702,609	11,640	22,674	63.1	1,609,538	761,637	374	28	129	24.3
	Central of Georgia	1952	1,754	191,066	195,844	2,882	7,222	69.2	478,739	228,301	88	22	2	1.8
		1951	1,765	224,631	225,550	3,616	7,188	69.8	475,708	227,066	88	6	16	14.5
	Gulf, Mobile & Ohio	1952	2,718	314,942	314,942	294	16,775	73.5	1,098,285	538,957	85	..	4	4.5
		1951	2,851	307,849	307,849	177	16,105	74.8	1,035,762	511,326	80	..	3	3.6
	Illinois Central	1952	6,539	1,551,282	1,556,992	52,747	56,136	65.6	4,030,103	1,933,684	550	12	82	12.7
		1951	6,539	1,471,092	1,476,628	53,244	52,485	63.8	3,809,908	1,794,932	568	28	65	9.8
	Louisville & Nashville	1952	4,756	967,494	1,016,363	25,666	35,630	65.2	2,600,553	1,342,499	247	69	55	14.8
		1951	4,756	1,010,944	1,075,091	28,601	34,579	64.3	2,526,611	1,289,421	284	58	101	22.8
	Nash., Chatt. & St. Louis	1952	1,032	193,788	196,899	3,237	6,400	74.7	405,351	196,331	51	..	2	3.8
		1951	1,049	188,845	191,819	3,016	6,181	74.3	389,966	186,983	54	..	6	10.0
	Seaboard Air Line	1952	4,135	559,093	559,093	530	21,798	65.7	1,522,609	709,477	146	72	5	2.2
		1951	4,136	584,755	584,755	910	21,246	66.1	1,475,063	692,437	172	87	64	19.8
	Southern	1952	6,264	1,041,161	1,041,249	11,695	41,038	71.8	2,581,027	1,207,731	277	69	67	16.2
		1951	6,292	1,120,675	1,124,698	13,272	40,491	72.6	2,572,176	1,223,531	378	40	109	20.7
Northwestern Region	Chicago & North Western	1952	7,872	919,142	929,398	18,397	37,511	67.5	2,632,488	1,162,841	305	5	87	21.9
		1951	7,889	961,236	978,478	24,912	36,922	65.8	2,589,094	1,199,165	334	4	142	29.6
	Chicago Great Western	1952	1,441	147,902	148,020	1,228	8,824	68.7	593,305	272,319	34	..	1	2.9
		1951	1,441	146,011	146,306	9,281	8,413	71.1	561,664	264,779	32	..	2	5.9
	Chic., Milw., St. P. & Pac.	1952	10,663	1,247,163	1,287,399	51,688	50,443	63.8	3,483,126	1,562,236	401	47	77	14.7
		1951	10,664	1,311,563	1,368,331	44,427	51,228	61.6	3,703,046	1,682,947	421	40	76	14.2
	Chic., St. P., Minn. & Omaha	1952	1,606	198,338	200,903	6,187	6,101	70.8	417,562	198,512	65	..	26	28.6
		1951	1,606	215,625	223,224	10,491	6,363	67.6	459,484	219,051	74	..	36	32.7
	Duluth, Missabe & Iron Range	1952	569	223,151	224,378	1,952	10,153	50.4	1,064,076	640,968	81	..	6	6.9
		1951	567	203,996	205,077	1,569	9,450	50.9	979,134	584,314	62	..	5	7.5
	Great Northern	1952	8,301	1,289,917	1,296,508	51,316	53,440	63.4	4,121,110	2,098,597	352	98	60	11.8
		1951	8,309	1,261,948	1,265,206	44,256	51,183	61.6	3,987,978	2,008,672	403	82	58	10.7
	Minneap., St. P. & S. S. M.	1952	4,172	444,385	450,091	5,429	15,943	67.9	1,099,381	550,281	110	..	8	6.8
		1951	4,173	466,145	478,490	8,149	15,943	62.4	1,166,222	568,087	114	..	13	10.2
	Northern Pacific	1952	6,585	912,674	944,447	43,315	37,974	67.8	2,687,833	1,272,705	313	11	77	19.2
		1951	6,591	899,752	923,553	49,874	37,577	68.6	2,679,208	1,283,584	332	14	67	16.2
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1952	13,072	2,499,191	2,614,203	112,446	106,924	67.1	7,046,439	2,775,291	587	50	128	16.7
		1951	13,096	2,506,976	2,601,017	102,038	106,150	67.4	6,973,986	2,777,516	630	83	126	15.0
	Chic., Burl. & Quincy	1952	8,773	1,300,157	1,314,380	50,570	55,287	67.6	3,696,406	1,689,672	357	14	103	21.7
		1951	8,791	1,248,234	1,274,070	49,073	54,085	67.0	3,624,439	1,649,668	381	18	136	25.4
	Chic., Rock I. & Pac.	1952	7,902	936,872	941,488	7,154	37,048	68.1	2,550,242	1,150,322	185	38	44	16.5
		1951	7,902	956,499	958,700	17,163	33,919	65.9	2,298,363	1,053,022	216	39	54	17.5
	Denver & R. G. Wn.	1952	2,333	406,545	444,361	52,835	18,240	71.2	1,251,149	567,967	108	21	23	15.1
		1951	2,334	385,355	423,465	54,156	17,526	73.1	1,146,226	542,793	124	17	21	13.0
	Southern Pacific	1952	8,059	2,355,247	2,488,870	313,008	101,632	65.5	6,997,859	2,870,340	718	5	145	16.7
		1951	8,077	2,186,910	2,301,216	292,384	95,627	65.6	6,579,705	2,719,351	719	9	155	17.6
	Union Pacific	1952	9,835	3,031,899	3,149,866	199,901	123,058	66.6	8,300,098	3,517,361	671	14	122	15.1
		1951	9,756	2,693,977	2,806,775	191,492	114,932	67.4	7,698,772	3,329,336	628	16	133	17.1
	Western Pacific	1952	1,190	265,789	269,865	17,259	12,568	71.2	811,090	373,522	43	1	4	8.3
		1951	1,190	256,665	261,113	16,328	13,291	76.1	817,670	383,952	45	14	24	28.9
Southwestern Region	International-Gt. Northern*	1952	1,104	167,266	167,266	....	6,104	69.0	456,380	212,459	45	8	7	11.7
		1951	1,104	188,552	188,730	....	6,735	68.2	470,500	227,769	47	1	13	21.3
	Kansas City Southern	1952	886	167,692	167,697	394	8,997	69.1	618,038	293,174	26	2	8	22.2
		1951	886	166,806	166,814	243	9,138	68.3	615,971	287,497	25	8	25	43.1
	Mo.-Kans.-Texas Lines	1952	3,230	387,929	387,929	4,426	14,838	66.6	963,682	418,904	90	7	8	7.6
		1951	3,230	396,366	398,583	6,042	14,995	65.7	977,772	415,396	85	7	21	18.6
	Missouri Pacific*	1952	6,932	1,249,254	1,253,459	15,169	49,422	68.8	3,269,222	1,465,580	297	29	61	15.8
		1951	6,932	1,276,154	1,299,685	17,617	49,127	67.8	3,302,827	1,496,188	350	3	64	15.3
	Texas & Pacific	1952	1,832	338,335	338,335	4,017	14,133	63.8	982,381	388,969	62	7	6	8.0
		1951	1,844	341,890	341,890	7,763	14,100	65.2	959,161	377,194	70	14	42	33.3
	St. Louis-San Francisco	1952	4,567	628,913	629,026	6,099	24,432	65.3	1,657,909	731,826	183	15	26	11.6
		1951	4,570	654,716	656,638	6,357	22,989	64.7	1,568,606	697,047	177	77	96	27.4
	St. Louis Southw. Lines	1952	1,562	326,865	326,925	4,467	14,113	73.5	858,814	383,902	54	21	13	14.8
		1951	1,562	332,793	336,584	4,531	13,904	72.7	844,567	377,533	76	11	19	17.9
	Texas & New Orleans	1952	4,280	801,498	802,418	26,119	28,227	63.2	1,976,237	858,248	221	..	24	9.8
		1951	4,291	812,538	812,770	18,820	27,985	64.5	1,893,464	805,466	228	..	37	14.0

For the Month of September 1952 Compared with September 1951

	Region, Road and Year		Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Mile per loco. per day
New Eng. Region	Boston & Maine	1952	1,247	8,384	9,631	3.1	38,458	2,375	1,021	26.8	897	47.3	4,953	16.2	98.6
		1951	1,238	8,099	9,337	2.3	38,621	2,427	1,072	27.3	900	45.6	5,128	15.9	95.5
	N. Y., N. H. & Htfd	1952	1,058	15,787	16,845	2.7	36,243	2,448	1,082	27.0	643	33.4	5,858	14.8	115.9
		1951	1,361	13,654	15,015	3.5	35,699	2,424	1,067	26.9	612	32.1	5,479	14.7	109.6
Great Lakes Region	Delaware & Hudson	1952	3,302	6,830	10,132	3.9	60,187	3,341	1,817	37.3	1,276	45.9	16,414	18.1	61.8
		1951	2,658	6,257	8,915	7.1	57,966	3,122	1,743	38.4	1,549	53.5	17,350	18.7	66.3
	Del., Lack. & Western	1953	3,251	11,691	14,942	5.2	49,625	3,185	1,507	30.8	880	39.7	14,004	15.8	142.4
		1951	4,416	11,070	15,486	5.9	47,252	3,054	1,431	30.4	822	37.6	12,943	15.7	117.8
	Erie	1952	6,154	23,258	29,412	3.3	65,038	3,661	1,526	26.1	1,065	58.5	13,810	17.9	131.5
		1951	5,319	24,258	29,577	3.7	63,312	3,620	1,474	26.1	1,041	59.6	13,527	17.7	113.0
	Grand Trunk Western	1952	3,427	9,888	13,315	5.0	47,161	2,382	1,043	29.2	629	32.5	8,750	20.0	130.0
		1951	3,466	10,100	13,566	4.2	48,035	2,322	1,025	30.1	647	39.2	9,108	20.8	137.5
	Lehigh Valley	1952	3,505	9,071	12,576	6.1	65,439	3,433	1,714	33.4	1,013	41.3	10,632	19.5	248.3
		1951	1,960	13,694	15,654	7.2	65,434	3,470	1,689	32.2	845	36.2	10,902	19.1	171.2
	New York Central	1952	63,400	98,691	162,091	9.4	47,440	2,897	1,352	33.1	715	33.5	11,134	16.7	97.0
		1951	55,006	104,025	159,031	6.9	45,811	2,779	1,274	32.7	734	35.3	11,291	16.8	82.9
	New York, Chic. & St. L.	1952	5,300	20,364	25,664	6.3	49,672	2,930	1,309	33.2	1,380	59.6	15,993	17.3	118.9
		1951	5,065	21,117	26,182	4.2	49,762	2,874	1,340	32.5	1,334	61.6	15,402	17.6	110.8
	Pitts. & Lake Erie	1952	3,317	10,404	13,721	5.8	61,582	4,285	2,761	53.6	444	11.1	30,378	14.4	53.5
		1951	3,099	8,987	12,086	10.1	53,444	3,446	2,153	50.6	467	12.6	27,935	15.6	67.5
	Wabash	1952	6,704	13,441	20,145	7.0	58,841	2,792	1,189	26.8	979	51.7	8,436	21.3	105.8
		1951	7,278	14,463	21,741	6.3	56,220	2,738	1,212	27.8	974	48.6	8,538	20.7	99.0
Central Eastern Region	Baltimore & Ohio	1952	45,980	47,633	93,613	8.9	44,477	3,241	1,654	38.7	926	36.5	14,552	13.9	93.9
		1951	43,134	52,930	96,064	5.4	43,095	3,117	1,575	38.2	911	36.7	14,603	14.0	86.3
	Central of New Jersey	1952	378	9,934	10,312	3.1	36,248	3,134	1,660	39.3	401	14.9	9,162	12.2	168.1
		1951	338	8,354	8,692	3.1	37,300	3,124	1,661	38.3	408	15.7	9,108	12.5	86.5
	Central of Pennsylvania	1952	1,306	3,698	5,004	16.7	45,593	3,354	1,846	40.0	760	26.7	17,404	14.4	80.7
		1951	1,349	3,497	4,846	20.5	41,482	3,043	1,665	39.9	715	25.3	16,473	14.7	96.5
	Chicago & Eastern Ill.	1952	2,051	4,169	6,220	4.5	43,883	2,876	1,433	33.5	1,030	44.3	7,001	15.3	155.8
		1951	1,495	3,132	4,627	9.4	43,004	2,633	1,301	32.6	1,250	54.7	6,243	16.4	158.6
	Elgin, Joliet & Eastern	1952	6,619	14,207	20,826	5.4	21,904	3,278	1,830	44.5	271	9.1	23,299	7.0	110.6
		1951	5,605	16,262	21,867	2.5	20,822	3,389	1,912	45.7	302	10.0	27,082	6.3	124.4
	Pennsylvania System	1952	100,561	105,155	205,716	10.3	49,517	3,254	1,656	35.8	780	31.3	16,075	15.7	87.8
		1951	94,612	119,155	213,867	8.6	48,877	3,238	1,642	36.1	778	31.9	16,447	15.6	85.4
	Reading	1952	10,568	20,975	31,543	6.7	41,014	3,122	1,731	42.9	638	21.6	15,212	13.1	70.8
		1951	10,111	21,312	31,423	4.5	36,881	2,841	1,561	42.7	615	21.3	14,529	13.0	67.6
	Western Maryland	1952	4,029	3,142	7,171	4.1	40,228	2,922	1,690	46.4	1,339	42.9	12,271	14.0	61.1
		1951	3,450	3,396	6,846	2.9	43,120	2,927	1,644	45.2	1,365	46.2	11,320	14.9	55.5
Pocahontas Region	Chesapeake & Ohio	1952	40,311	28,299	68,610	3.3	73,053	4,302	2,431	49.2	1,535	53.6	21,334	17.2	78.0
		1951	49,520	27,068	76,588	5.4	70,530	4,193	2,357	49.7	1,512	53.6	22,957	17.0	79.2
	Norfolk & Western	1952	24,200	8,490	32,690	2.1	71,879	4,387	2,401	49.2	1,566	54.1	26,722	16.7	106.2
		1951	28,448	8,858	37,306	1.6	71,518	4,360	2,400	49.4	1,635	56.0	28,791	16.7	116.3
Southern Region	Atlantic Coast Line	1952	14,480	18,206	32,686	3.1	36,911	2,235	1,054	34.0	811	38.6	4,787	16.6	89.0
		1951	12,058	18,608	30,666	3.3	36,512	2,300	1,088	33.6	859	40.5	4,672	15.9	49.8
	Central of Georgia	1952	2,431	5,933	8,364	4.9	42,161	2,516	1,200	31.6	897	41.0	4,339	16.8	65.7
		1951	2,068	6,329	8,397	5.3	37,258	2,127	1,015	31.6	942	42.7	4,288	17.6	75.0
	Gulf, Mobile & Ohio	1952	3,468	11,856	15,324	3.0	64,895	3,495	1,715	32.1	1,196	50.6	6,610	18.6	127.9
		1951	3,091	11,893	14,984	3.3	62,652	3,372	1,665	31.7	1,133	47.7	5,978	18.6	133.5
	Illinois Central	1952	26,455	31,920	58,375	2.0	41,732	2,642	1,268	34.4	1,123	49.7	9,357	16.1	90.1
		1951	21,960	33,525	55,485	2.2	44,293	2,615	1,232	34.2	1,104	50.6	9,150	17.1	83.5
	Louisville & Nashville	1952	24,461	16,158	40,619	5.5	42,196	2,692	1,390	37.7	1,027	41.8	9,409	15.7	103.5
		1951	24,551	16,695	41,246	9.8	39,870	2,507	1,279	37.3	1,042	43.4	9,037	16.0	90.7
	Nash., Chatt. & St. Louis	1952	1,248	5,862	7,110	3.2	38,965	2,094	1,014	30.7	935	40.8	6,341	18.6	126.7
		1951	1,069	5,173	6,242	4.2	39,788	2,069	992	30.3	1,010	45.0	5,941	19.3	119.7
	Seaboard Air Line	1952	10,101	14,949	25,050	2.2	49,386	2,752	1,282	32.5	981	45.9	5,719	18.1	99.9
		1951	8,981	15,096	24,077	1.9	44,973	2,550	1,197	32.6	966	44.9	5,581	17.8	69.8
	Southern	1952	15,055	21,587	36,642	4.2	41,554	2,497	1,169	29.4	998	47.2	6,427	16.8	90.6
		1951	12,337	30,148	42,485	4.2	39,275	2,311	1,099	30.2	980	44.7	6,482	17.1	80.1
Northwestern Region	Chicago & North Western	1952	19,284	38,226	57,510	3.9	45,194	3,024	1,336	31.0	684	32.6	4,924	15.8	82.2
		1951	18,108	34,913	53,021	4.1	42,359	2,868	1,328	32.5	731	34.2	5,067	15.7	76.2
	Chicago Great Western	1952	1,280	5,770	7,050	2.7	69,328	4,019	1,845	30.9	1,220	57.5	6,299	17.3	148.5
		1951	1,666	5,740	7,406	2.7	65,053	3,859	1,819	31.5	1,096	49.0	6,125	16.9	164.3
	Chic., Milw., St. P. & Pac.	1952	29,827	36,176	66,003	3.9	47,237	2,816	1,263	31.0	772	39.0	4,884	16.9	91.9
		1951	28,282	41,507	69,789	3.1	46,433	2,843	1,292	32.9	810	40.1	5,261	16.4	93.1
	Chic., St. P., Minn. & Omaha	1952	1,099	8,590	9,689	3.8	32,602	2,202	1,047	32.5	681	29.6	4,120	15.5	80.5
		1951	1,086	9,114	10,200	2.4	29,274	2,240	1,068	34.4	683	29.4	4,547	13.7	78.2
	Duluth, Missabe & Iron Range	1952	14,299	2,420	16,719	2.3	80,906	4,975	2,997	63.1	1,251	39.3	37,549	17.0	101.5
		1951	13,103	2,324	15,427	3.2	84,415	5,029	3,001	61.8	1,240	39.4	34,351	17.6	112.2
	Great Northern	1952	23,047	24,373	47,420	3.0	50,135	3,243	1,651	39.3	1,374	55.1	8,427	15.7	95.7
		1951	21,694	29,173	50,867	3.2	49,416	3,202	1,613	39.2	1,368	56.6	8,058	15.6	90.2
	Minneap., St. P. & S. S. M.	1952	6,360	10,182	16,542	4.9	44,416	2,498	1,250	34.5	1,116	47.6	4,397	18.0	137.2
		1951	6,286	12,498	18,784	5.4	45,661	2,528	1,231	35.6	1,037	46.6	4,538	18.3	140.9
	Northern Pacific	1952	17,874	17,796	35,670	4.1	50,551	2,966	1,404	33.5	1,127	49.6	6,442	17.2	89.8
		1951	18,525	21,286	39,811	5.3	49,320	3,012	1,443	34.2	1,071	45.7	6,492	16.6	85.7
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1952	43,722	36,040	79,762	4.1	61,102	2,832	1,116	26.0	1,120	64.3	7,077	21.7	127.4
		1951	42,634	31,835	74,469	4.8	57,615	2,799	1,115	26.2	1,213	68.8	7,070	20.7	113.5
	Chic., Burl. & Quincy	1952	20,377	24,573	44,950	3.2	55,021	2,850	1,303	30.6	1,272	61.5	6,420	19.4	103.0
		1951	17,519	25,529	43,048	2.7	54,492	2,914	1,326	30.5	1,275	62.4	6,255	18.8	89.0
	Chic., Rock I. & Pac.	1952	12,887	23,906	36,793	3.2	49,175	2,732	1,232	31.0	1,032	48.8	4,852	18.1	126.9
		1951	10,057	25,752	35,809	3.3	43,573	2,412	1,105	31.0	999	48.8	4,442	18.1	109.5
	Denver & R. G. Wn.	1952	6,581	8,934	15,515	3.7	54,151	3,086	1,401	31.1	1,163	52.4	8,115	17.6	114.9
		1951	6,963	7,799	14,762	4.0	51,034	2,990	1,416	31.0	1,208	53.4	7,752	17.2	103.6
	Southern Pacific	1952	28,392	54,275	82,667	2.7	50,136	3,011	1,235	28.2	1,178	63.7	11,872	16.9	116.1
		1951	24,633	48,749	73,382	3.1	50,855	3,047	1,259	28.4	1,205	64.5	11,223	16.9	104.6
	Union Pacific	1952	27,822	44,255	72,077	2.5	64,482	2,779	1,178	28.6	1,616	84.8	11,921	23.6	143.7
		1951	27,709	37,496	65,205	2.5	63,668	2,903	1,255	29.0	1,685	86.2	11,375	22.3	132.1
	Western Pacific	1952	2,425	5,476	7,901	4.8	70,358	3,081	1,419	29.7	1,734	81.9	10,463	23.1	204.2
		1951	1,761	5,160	6,921	5.0	69,619	3,205	1,505	28.9	2,056	93.5	10,755	21.9	112.3
Southwestern Region	International-Gt. Northern*	1952	857	7,679	8,536	2.7	52,639	2,743	1,277	34.8	840	35.0	6,415	19.3	97.3
		1951	718	7,147	7,865	2.0	49,762	2,509	1,215	33.8	957	41.5	6,877	19.9	110.2
	Kansas City Southern	1952	998	6,675	7,673	3.6	75,564	3,709	1,760	32.6	1,287	57.1	11,030	20.5	165.9
		1951	1,082	6,422	7,504	2.8	71,892	3,720	1,736	31.5	1,252	58.3	10,816	19.5	103.1
	Mo.-Kans.-Texas Lines	1952	3,162	7,608	10,770	5.7	49,301	2,487	1,081	28.2	1,350	71.8	4,323	19.8	132.2
		1951	2,812	7,296	10,108	7.7	46,607	2,473	1,051	27.7	1,363	74.9	4,287	18.9	130.1
	Missouri Pacific*	1952	17,215	18,215	35,430	2.5	54,847	2,633	1,180	29.7	1,356	66.5	7,047	21.0	116.3
		1951	14,230	18,443	32,673	2.8	52,373	2,607	1,181	30.5	1,490	72.2	7,195	20.2	112.0
	Texas & Pacific	1952	2,265	7,547	9,812	3.3	66,212	2,905	1,150	27.5	1,322	75.4	7,077	22.8	156.8
		1951	2,144	7,791	9,935	5.8	59,605	2,809	1,105	26.8	1,271	72.9	6,818	21.2	100.7
	St. Louis-San Francisco	1952	8,081	15,824	23,905	3.1	45,251	2,644	1,167	30.0	1,050	53.7	5,341	17.2	105.6
		1951	7,375	14,897	22,272	3.7	42,777	2,403	1,068	30.3	1,030	52.5	5,084	17.9	68.4
	St. Louis Southw. Lines	1952	1,794	5,566	7,360	1.6	52,630	2,631	1,176	27.2	1,723	86.2	8,193	20.0	136.9
		1951	1,670	5,873	7,543	2.1	49,200	2,540	1,136	27.2	1,755	88.9	8,057	19.4	115.7
	Texas & New Orleans	1952	5,287	19,528	24,815	2.7	46,149	2,484	1,079	30.4	1,167	60.7	6,684	18.7	119.9
		1951	3,966	20,432	24,398	2.5	43,264	2,353	1,001	28.8	1,117	60.2	6,257	18.6	109.1

*Report of trustee or trustees.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

EXPERIENCE IS THE BEST TEACHER

You're looking at an *extra* SKF Service regularly available to railroad maintenance men—*a clinic* at SKF's Philadelphia plant to teach these men the best, safest, most economical way to maintain anti-friction railroad bearings.*

This is another proof of the fact that SKF service doesn't stop when your bearings are delivered. It's one of the reasons why railroads depend on SKF for something *more* than just bearings—for the extra engineering help that stretches maintenance dollars to the limit.

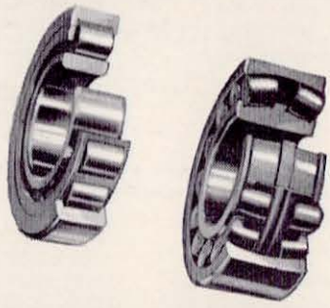
**Shown below are the railroads represented at the March 18-19, 1952 clinic*

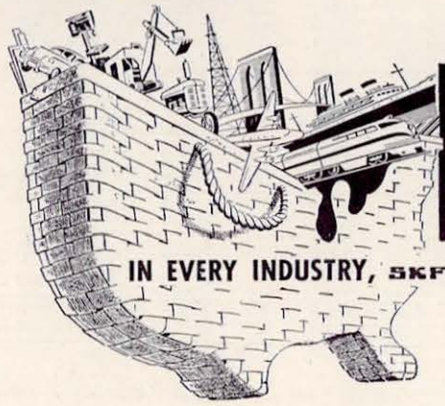
ERIE · Atlantic Coast Line · Lackawanna Railroad · The New York, Newfoundland and Hartford Railroad Co. · Western Maryland · Reading Lines · PRR · B&O · Texas Special Lines · SR · Southern Railway System

and SKF has the most of it

SKF installed the first railroad journal bearing in 1921. Since then, SKF journal bearings have been applied throughout the world to over 30,000 passenger cars, 52,800 freight cars, over 11,300 steam, diesel and electric locomotives. This reliance on SKF by an industry whose standards for reliability are so high is typical of SKF's acceptance by *all* industry.

SKF INDUSTRIES, INC., PHILA. 32, PA.—*manufacturers of* **SKF** *and* HESS-BRIGHT *bearings.* 7355

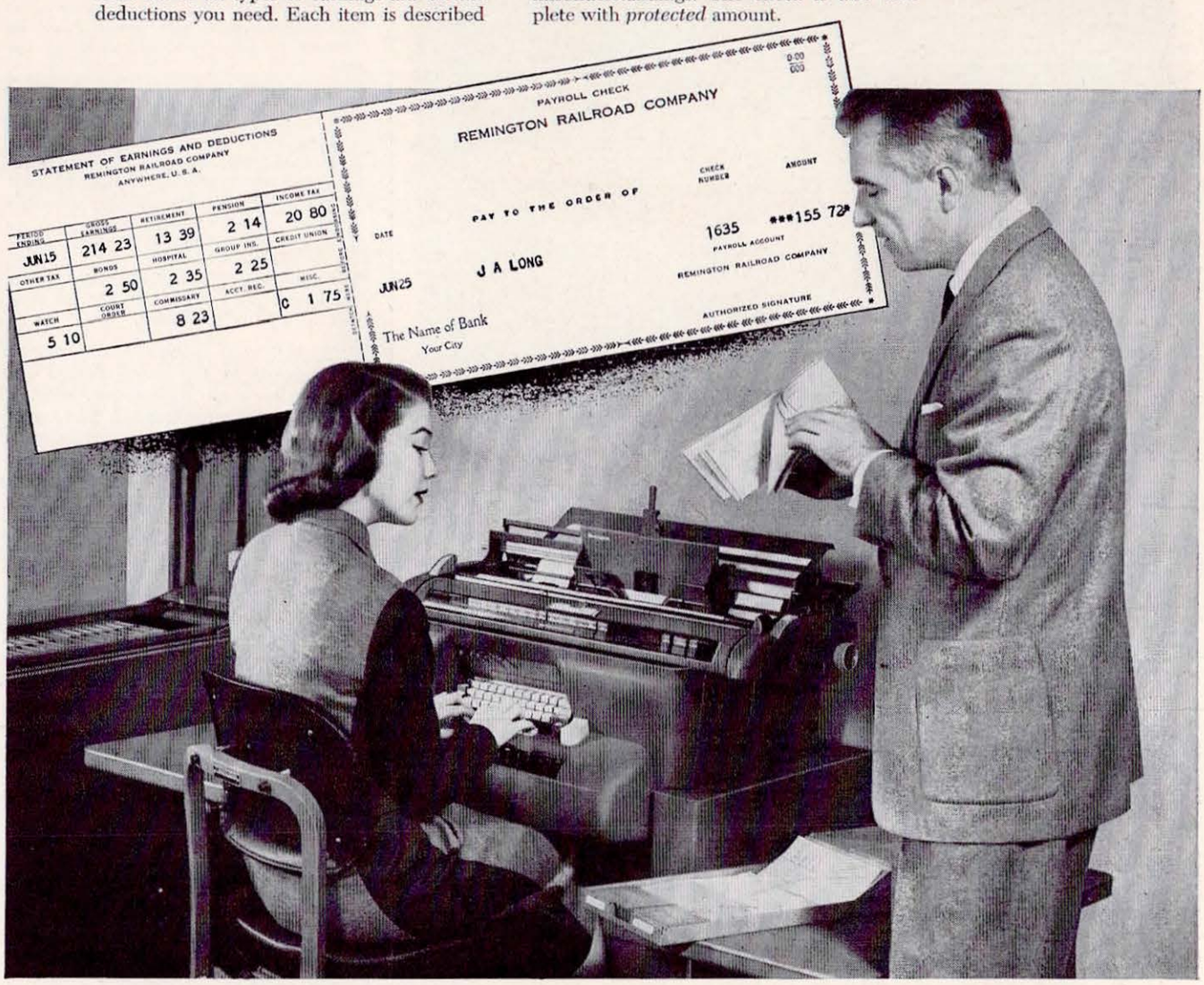




SKF®
BALL AND ROLLER BEARINGS

IN EVERY INDUSTRY, SKF Puts The Right Bearing In The Right Place

IT'S A BETTER PAYCHECK, TOO. Statement shows all types of earnings and all the deductions you need. Each item is described fully. There is no coding or other cause for misunderstandings. The check is also complete with *protected* amount.



The fastest known way to produce paychecks

NEW SPEED. Saves 50-75% of the usual time required for handling forms. Get touch-method machine speed which saves repeated shifting of the eyes from payroll media to machine keyboard.

NEW ECONOMY. Pays for itself by savings on check forms alone. Big volume is handled with fewer machines, fewer operators. No need to hire special skills; operators trained quickly on the job.

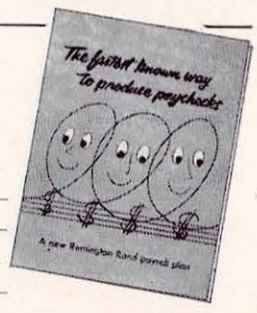
NEW SIMPLICITY. Saves many payroll computations. Eliminates several costly separate records which require extra work steps for repeated reference. Levels off peak loads of payroll department.

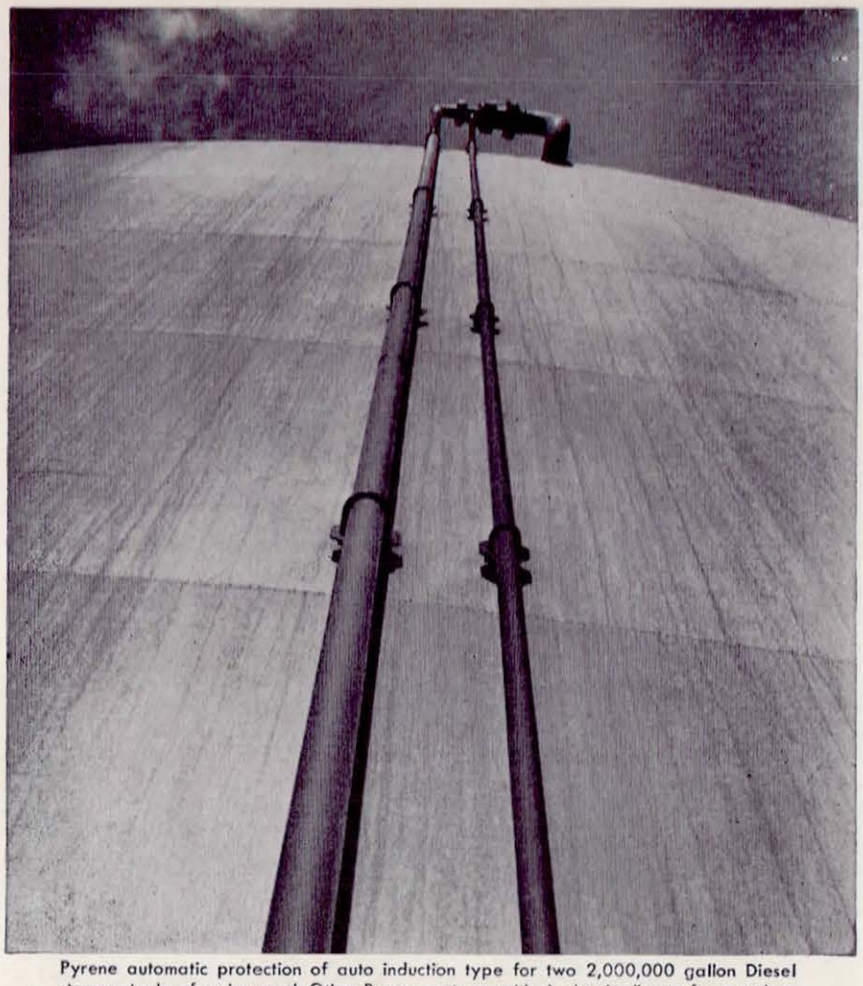
Send coupon for sample check and more information on this remarkable new Remington Rand STUB-CHECK PAYROLL PLAN

Remington Rand INC

Management Controls Reference Library
Room 1569, 315 Fourth Ave., New York 10
Please send me check SPAB-9012 and folder AB-569.

Name_____
Dept._____ Railroad_____
Address_____
City_____ Zone_____ State_____





Pyrene automatic protection of auto induction type for two 2,000,000 gallon Diesel storage tanks of major road. Other Pyrene systems, with single pipeline to foam maker, use other methods of foam compound induction.

AIR FOAM FIRE PROTECTION FOR DIESEL HAZARDS

in storage tanks, repair shops, locomotives

The danger of Diesel fire losses *can be eliminated*. Many major lines have done it by installing Pyrene* Air Foam equipment.

Pyrene Air Foam kills fire in seconds, requires little space, is extremely flexible. Storage tanks of any size can be protected with systems delivering hundreds or thousands of gallons of foam a minute! Completely automatic tank systems are available. No matter what the size of a Diesel repair shop, there's Pyrene equipment for it. Pyrene makes units to protect entire locomotives, yet small enough to fit comfortably into cramped quarters.

No special training is required to operate Pyrene equipment. It's simplicity itself. Most manual equipment—even the largest—can be handled by one man.

Call on Pyrene engineers to help you solve *your* fire protection problems. Write for free Pyrene Air Foam catalog—a valuable reference work.

*T.M. Reg. U.S. Pat. Off.

AMERICA'S MOST COMPLETE LINE OF AIR FOAM EQUIPMENT

PYRENE MANUFACTURING COMPANY

678 Belmont Avenue Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

(*Continued from page 68*)

- A clear statement of federal policy in the basic law, that users of transportation facilities built with public funds be required to pay their fair share of the cost.
- Legislation to prevent "unreasonable" delay in action by the Interstate Commerce Commission on requests for rate adjustments.
- Modernization of rules of rate making to require the I.C.C. to consider first the effect of new rates on the industry's return on invested capital.
- Repeal of certain rules that apply only to railroads.
- Legislation allowing railroads to appeal to federal bodies from adverse decisions of state commissions.

An increased tempo in movement requirements by the armed forces was forecast by J. J. Kelley, manager of the Military Transportation Section of the Association of American Railroads. He explained that 200 days' supply had to be in the world-wide military transport "pipeline" to deliver one day's supply in the field. "These transportation requirements are not seasonal, but continue daily, weekly and monthly," he said. He urged prompt, clean unloading of cars to help meet them.

G. W. Thompson, general chairman of the board and general traffic manager of the Missouri Portland Cement Company, presided over the two-day meeting.

OVERSEAS

Indian Railways to Celebrate Centenary

The Ministry of Railways of the government of India is organizing an exhibition to celebrate a century of progress on Indian railways, according to Foreign Commerce Weekly. The exhibition, scheduled to be held next year in New Delhi from February 28 to April 17, will display the variety of services provided on Indian railways by featuring different types of rolling stock; show the relationship of the railways to the nation's economy; and how Indian railways compare with railways elsewhere in the world.

Also featured will be displays indicating the industrial effort of other countries which contribute to the growth of Indian railways; modern developments of other countries in railway transportation and allied industries; and advances in production techniques. Exhibits may be in the form of maps, charts, photographs and films; raw or processed engineering materials; and working, still, or sectional models of structures and machinery or rolling stock. Water and electricity will be available for working exhibits. Track space, broad- and

meter-gage only, will be available for exhibitors of rolling stock.

Cooperation of American railroads and railroad supply manufacturers in lending exhibit material has been requested by the Department of Commerce. Exhibits will be assembled in Washington, D.C., transported to New Delhi and returned to the supplier soon after close of the exhibition. Cost of transportation from Washington to New Delhi, and return, as well as space rental and other local costs, including insurance, will be assumed by the Department of State. Arrangements for dispatch of exhibit material to India may be made with Z. B. Hyde, chief of the fairs and exhibitions section, international trade development division, Office of International Trade, Department of Commerce, Washington 25, D.C.

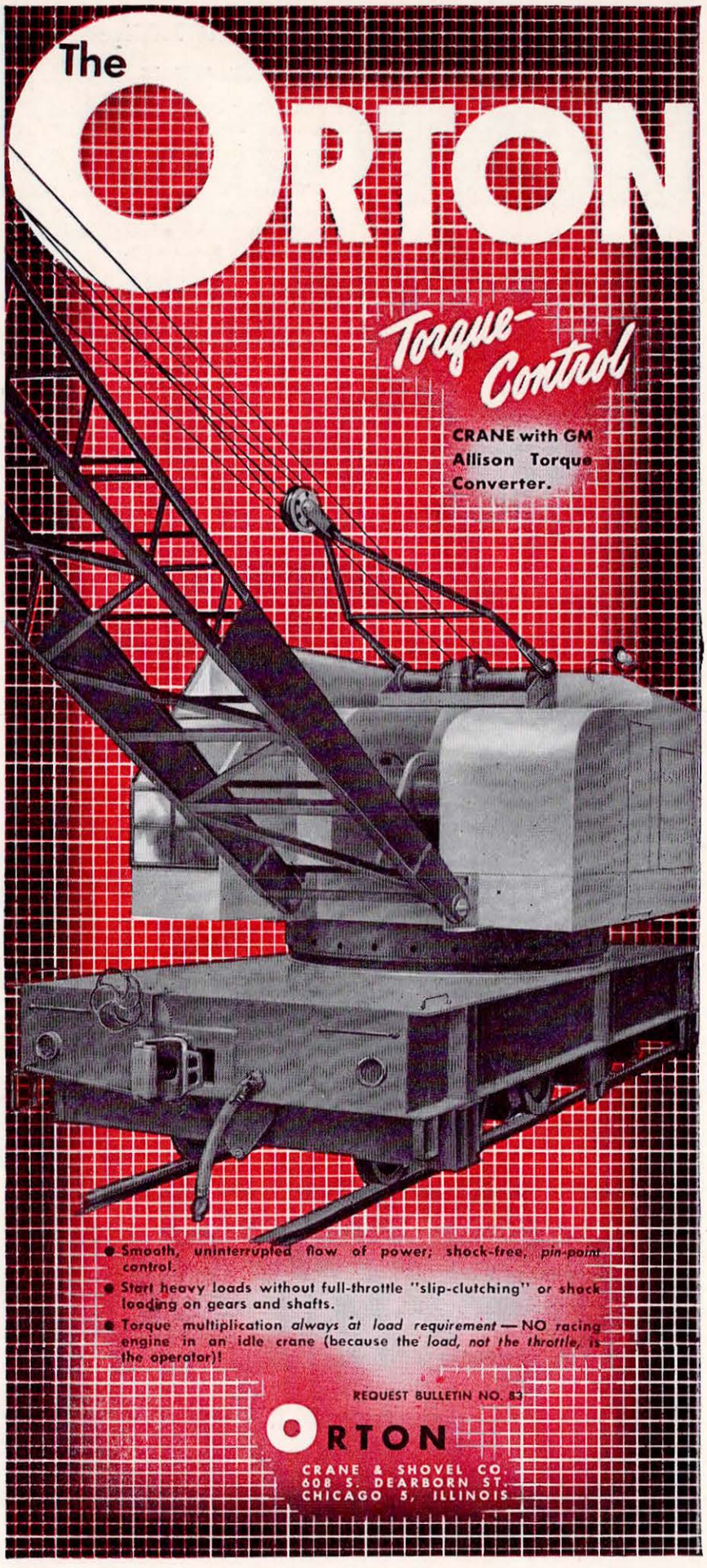
Central Africa's First Electrified RR Opened

A 105-kilometer (approximately 65-mile) stretch of electrified railroad, said to be the first in Central Africa, recently was placed in operation between Jadotville and Tenke in the Belgian Congo, according to Foreign Commerce Weekly. Traffic over this electrified portion of the Chemin de Fer du Bas Congo au Katanga is the heaviest on the entire system.

Although of great importance economically, perhaps the most significant phase of the electrification is technical, Foreign Commerce Weekly added. Instead of using conventional three-phase current at 1,500 or 2,000 volts, a single phase 22,000-volt, 50-cycle system is used. This method is used also on a 78-kilometer stretch in France between Aix-les-Bains and La Roche-sur-Foront. It is estimated the new African system saved 40 to 45 per cent in installation cost, an appreciable amount of the saving being due to the smaller amounts of copper needed in trolley and feeder lines. Also, the 22,000 volt installation permits greater distances between substations.

Great Britain.—British Railways shortly will undertake use of multiple-unit diesel trains in passenger service. With approval of the British Transport Commission, the Railway Executive is said to be planning an immediate initial expenditure of up to £500,000 on the program. Such a step would be the first in a recently announced policy of using lightweight diesel units, wherever suitable, to reinforce or replace steam services.

Thailand.—This country's State Railways are inviting bids until next January 6 for supply of 400 low-side steel cars for use on one-meter gage railroads, according to Foreign Commerce Weekly. A set of bidding documents, including blueprints and specifications, may be borrowed from the Commercial Intelligence Division, U.S. Department of Commerce, Washington 25, D.C.

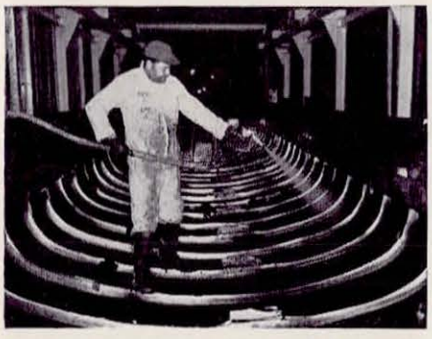

The ORTON
Torque-Control
CRANE with GM Allison Torque Converter.
● Smooth, uninterrupted flow of power; shock-free, pin-point control.
● Start heavy loads without full-throttle "slip-clutching" or shock loading on gears and shafts.
● Torque multiplication always at load requirement — NO racing engine in an idle crane (because the load, not the throttle, is the operator)!
REQUEST BULLETIN NO. 53
ORTON
CRANE & SHOVEL CO.
608 S. DEARBORN ST.
CHICAGO 5, ILLINOIS

Railway INSULMAT

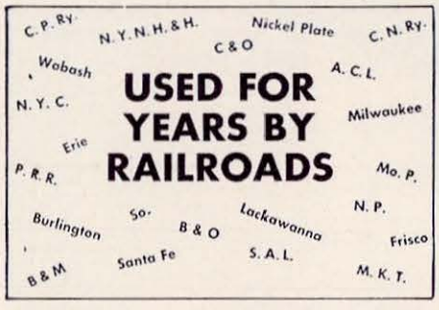
The remarkably effective 3-PURPOSE COATING that saves Railroads Thousands of Dollars every year

- Deadens Sound
- Kills Vibration Noises
- Protects Metal against Rust and Corrosion
- Prevents Condensation Drip and Resulting Damage to Freight
- Prevents Saturation of all types of Insulation Products
- Used as a Ceiling Finish instead of Plywood—it costs less and is better

Applied with spray gun to ceilings and side walls of freight, passenger and refrigerator cars and cabooses.



Railway Insulmat being applied to the inverted ceiling of a California Zephyr car.



It will pay you to investigate this tried and true product — RAILWAY INSULMAT. Send for circular today.

J. W. MORTELL CO.
563 Burch St., Kankakee, Ill.
Technical Coatings since 1895

Current Publications

PERIODICAL ARTICLE

The Nation's Railroads Modernize to Survive. Newsweek, October 27, 1952, pp. 96-99. Newsweek, 152 W. 42 st., New York 36. Single copies, 20 cents.

Newsweek's editors describe the ingenious methods the railroads are adopting to keep out of the red, and analyze the future of the industry.

TRADE PUBLICATIONS

How to Operate a Lift Truck. 24 pages. Hyster Company, 2902 N.E. Clackamas st., Portland 8, Ore. Free from Hyster or its authorized dealers.

Combining a two-color cartoon technique with a detailed manual, this booklet contains information on proper operation of lift trucks, safety and basic materials handling, and preventive maintenance. It is designed for use as a part of an operator training school or for individual study, and is slanted for both the beginner and the experienced operator. Plans are included for setting up a training obstacle course.

Fairmont Railway Motor Cars and Work Equipment. Bulletin 660, 52 pages. Fairmont Railway Motors, Inc., Fairmont, Minn. Free.

Catalog of the entire Fairmont line of engines, motor cars and accessories, trailers, push cars, ballast-maintenance cars, tool cars, ballast discers, weed burners, weed mowers, weed sprayers, oil sprayers, grouting outfits, derrick cars, and numerous rail-laying and tie-renewal equipment. Complete specifications and available attachments for each piece of equipment are included.

"How to Catch Man-Hour Thieves." Towmotor Corporation, 1226 E. 152nd st., Cleveland 10, Ohio. Free from Towmotor or its authorized representatives.

Illustrating how inefficient materials handling can handicap successful production, this booklet covers the five major causes of heavy man-hour losses and four basic plant operations in which such losses are most often sustained. Suggestions for procedures which have proved most effective in reducing these losses are detailed in this booklet.

PAMPHLET

Comparative Statement of Railway Operating Statistics, Individual Class I Steam Railways in the United States for the years ended December 31, 1951 and 1950. 63 pages. Prepared by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. For sale by Government Printing Office, Washington 25, D.C. No price given.

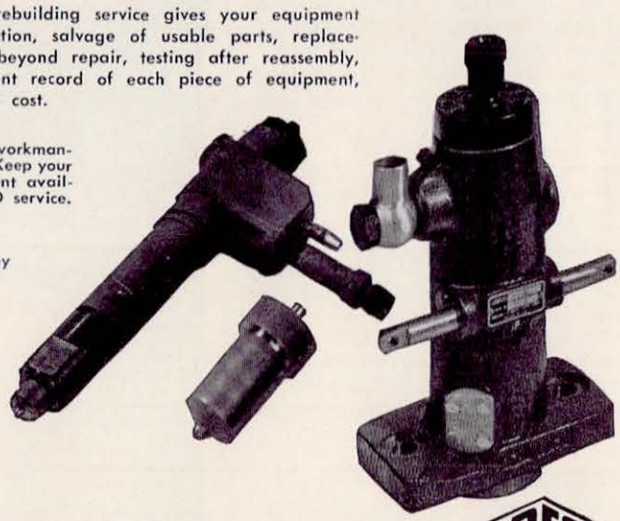
Contains, for each Class I railway, statistics on revenues and expenses, income and balance sheet items, traffic, freight commodities, freight train performance, passenger train performance, yard service performance, fuel and power, motive power, car equipment, and wages.

Your worn fuel injection equipment made "good as new"

Our expert rebuilding service gives your equipment thorough inspection, salvage of usable parts, replacement of those beyond repair, testing after reassembly, and a permanent record of each piece of equipment, all at moderate cost.

Materials and workmanship guaranteed. Keep your injection equipment available with ADECO service.

Write for your copy of our illustrated brochure.



ADECO PRODUCTS, INCORPORATED
CHICAGO 40, ILLINOIS

Designers and Manufacturers of Diesel Fuel Injection Equipment

"she might have been my kid..."

"There was no time to stop, see? She comes running out from behind this parked car right under my wheels. Her hair is in pigtails, and with the sun shining on it, she might have been *my* kid. We got her to the hospital. It took 3 pints of blood to bring her around. All I have to do is remember the sound of those screaming tires—and I know why *I'm* giving blood."

Yes, all kinds of people give blood—truck drivers, office workers, salesmen. And—for all kinds of reasons. But whatever *your* reason, this you can be sure of: Whether your blood goes to a local hospital, a combat area or for Civil Defense needs—this priceless, painless gift will some day save an American life!

Business Executives!

✓Check These Questions!

If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- ☐ Have you given your employees time off to make blood donations?
- ☐ Has your company given any recognition to donors?
- ☐ Do you have a Blood Donor Honor Roll in your company?
- ☐ Have you arranged to have a Bloodmobile make regular visits?
- ☐ Has your management endorsed the local Blood Donor Program?
- ☐ Have you informed your employees of your company's plan of co-operation?
- ☐ Was this information given through Plant Bulletin or House Magazine?
- ☐ Have you conducted a Donor Pledge Campaign in your company?
- ☐ Have you set up a list of volunteers so that efficient plans can be made for scheduling donors?

Remember, as long as a *single* pint of blood may mean the difference between life and death for *any* American . . . the need for blood is *urgent!*

Give Blood Now

CALL YOUR RED CROSS TODAY!

NATIONAL BLOOD PROGRAM

A PUBLIC SERVICE PROJECT THE ADVERTISING COUNCIL

NOTHING MOVES UNLESS IT'S MARKED...

Mark it better with

888®

RAILROAD CRAYONS

The American Crayon Company
Sandusky, Ohio New York

HYMAN-MICHAELS COMPANY

Relaying Rails ★★★ Dismantling

Used railroad equipment—cars—locomotives
Freight Car Replacement Parts

Complete stocks of guaranteed used freight car parts carried on hand by us at all times. Located conveniently for shipment to any part of the country. Write—Phone—Car or Track Dismantling, or Car Parts.

Main Office

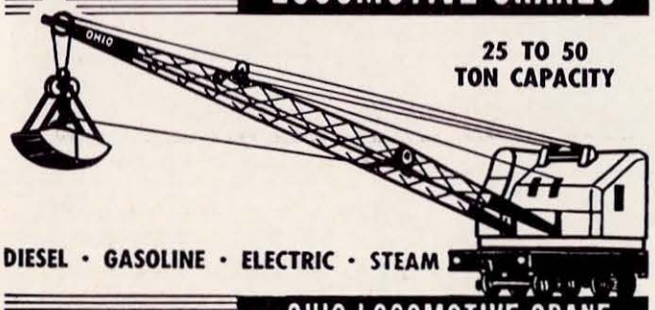
122 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS

Branches

Write—when interested in used Rails, Equipment, Cars,

St. Louis Los Angeles Havana, Cuba
New York San Francisco Houston
SERVICE QUALITY RELIABILITY

OHIO
LOCOMOTIVE CRANES



25 TO 50
TON CAPACITY

DIESEL • GASOLINE • ELECTRIC • STEAM

THE OHIO LOCOMOTIVE CRANE CO.
BUCYRUS, OHIO

RAILROAD EQUIPMENT
CARS—LOCOMOTIVES
REPAIR PARTS

RELAYING RAILS

STEEL STORAGE TANKS
6000—8000—10000 gal. cap.
CLEANED AND TESTED

THE PURDY COMPANY
8754 S. Dobson Avenue Chicago 19, Illinois

NEW AND USED EQUIPMENT

FOR SALE

Fourteen 70-ft. all-steel flat cars.

Wood decking and A B brakes. One private railroad car with living room, dining room, 3 bedrooms, and kitchen. All cars in first class condition. Will pass interchange. Inspection can be made at our Chicago yard.

Erman-Howell Division

LURIA STEEL AND TRADING CORP.
332 South Michigan Avenue Chicago 4, Illinois
Phone WAbash 2-0250

FOR SALE

65 ton General Electric 380 HP diesel electric locomotive. Rebuilt.

4 heavy duty steel flat cars, 70 ton capacity.

30 ton Industrial Brownhoist locomotive crane gasoline powered.

MISSISSIPPI VALLEY EQUIPMENT CO.
509 Locust St. St. Louis 1, Mo.

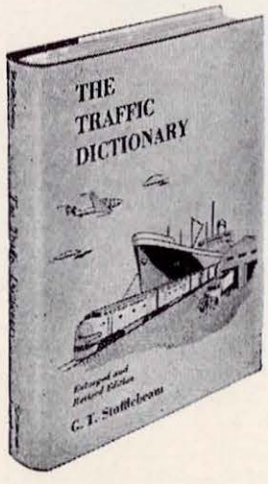
TANK CARS

2 only Class ICC-103-A, 8,000 gallon—50-ton trucks, Excellent condition.
Address Box 663, RAILWAY AGE, 30 Church St., New York 7, N. Y.

WANTED

ASSISTANT ENGINEER for switching railroad in Midwest. Duties include supervising track maintenance, making surveys, plans, etc. Give experience, education and age in first reply.
Box 667, RAILWAY AGE, 30 Church St., New York 7, N. Y.

THE TRAFFIC DICTIONARY
Fourth Edition



By GEORGE T. STUFFLEBEAM

Manager, Transportation Research, Remington-Rand

Enlarged and brought up to date this handbook contains 4,000 terms, phrases, code marks and abbreviations used in all branches of transportation. Terms used in warehousing, shipping documents, claim procedure and practice before the I.C.C. are included. Not only traffic managers but anyone concerned with shipping or traffic department work needs a copy of this standard reference.

320 pages, 4½ x 6, $3.75

SENT ON TEN DAYS' APPROVAL

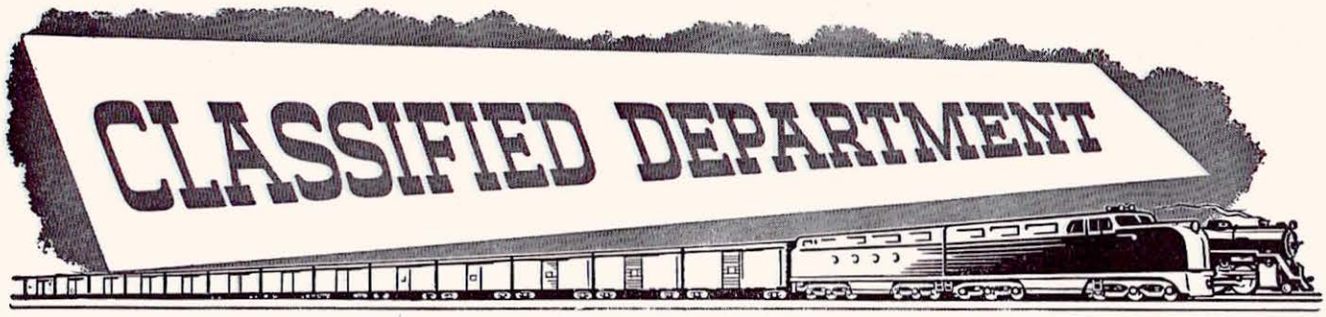
Simmons-Boardman Publishing Corporation
30 Church Street, New York 7, N. Y.

Please send me a copy of the edition of Stufflebeam's TRAFFIC DICTIONARY, on Ten Days' Approval. If satisfactory I will remit the list price of $3.75; otherwise I will return the book.

Name .....

Address .....

City ..... Zone..... State.....
(This offer is limited to retail customers in the United States) R.A. 12-15-52



Rates: $5.00 an inch (1" x 1⅝") per insertion; employment ads 10 cents a word, minimum $2.00. Add $1.00 for box address.

RAILROAD EQUIPMENT—*FOR SALE*

USED AS IS RECONDITIONED

STANDARD GAUGE FREIGHT CARS

Box—Double Sheathed, 50-Ton
Box, Single Sheathed, 50-Ton
Tank, 3,000-Gallon, High Pressure
Tank, 8,000-Gallon, Coiled and Non-Coiled
Gondolas, Composite or All-Steel, 50-Ton
Hoppers, Covered, All-Steel, 70-Ton
Hoppers, Twin, All-Steel, 50-Ton Cross Dump

Hoppers, All-Steel, 70-Ton, Cross Dump

EXTRA LONG FLAT CARS

40- & 50-Ton Capacity, Length 70' and 74'

CABOOSE CARS

Eight Wheel, Cupola Type

STANDARD GAUGE AIR DUMP CARS

Side Dump, 20-Yd., 40-Ton, Lift Door
End Dump, 20-Yd., 50-Ton, Drop Door
End Dump, 10-Yd., 30-Ton, Lift Door

OTHER EQUIPMENT

Locomotive Cranes
Overhead Cranes
Railroad Track Scales

STANDARD GAUGE 80-TON STEAM SWITCHING LOCOMOTIVE

Type 0-6-0, Oil-Burning, Built 1942

PASSENGER EQUIPMENT

Passenger Cars
Baggage Cars
4 All-Steel Dining Cars, Air-Conditioned

Send us your inquiries **We Buy Freight Cars for Dismantling** *Send us your offerings*

REPAIR PARTS For All Types of Freight Cars

IRON & STEEL PRODUCTS, INC.

GENERAL OFFICE
13486 S. Brainard Ave., Chicago 33, Illinois
Phone: BAyport 1-3456

NEW YORK OFFICE
50-c Church St., New York 7, N. Y.
Phone: BEekman 3-8230

"ANYTHING containing IRON or STEEL"

STORAGE TANKS
6,000 Gallon
8,000 Gallon
10,000 Gallon

Educational Services for RAILROAD MEN

Our New Service on Diesel Locomotive Operation is highly recommended for Engineers and Firemen

The Railway Educational Bureau Omaha 2, Nebraska

POSITION WANTED

AVAILABLE

Sales executive of wide experience in promotion of railroad mechanical and electrical equipment, with extensive acquaintance with these as well as purchasing and maintenance-of-way departments, particularly of eastern railroads.

Address Box 1215, RAILWAY AGE, 79 West Monroe St., Chicago 3, Ill.

PROFESSIONAL DIRECTORY

Robert W. Hunt Company
ENGINEERS
Inspection—Tests—Consultation
All Railway Equipment
Structures and Materials
General Office:
175 W. Jackson Boulevard
CHICAGO
New York-Pittsburgh-St. Louis

BUY CHRISTMAS SEALS

ENGINEERS—CONTRACTORS

Budgets Are Being Prepared Now For 1953

Keep your name, address and services in front of the responsible railroad men. Advertise in the

"PROFESSIONAL DIRECTORY"
Railway Age
30 Church St., New York 7, N. Y.

Advertisers IN THIS ISSUE

The information contained in the advertising pages of Railway Age constitutes an important supplement to the editorial content of this paper. Refer to them for the latest advances in equipment, materials and supplies.

Adeco Products, Incorporated 76
American Brake Shoe Company, Brake Shoe and Castings Division 30, 31
Agency—Doyle, Kitchen & McCormick
American Crayon Company, The 78
Agency—Gregory and House, Inc.
American Hair & Felt Co. 40
Agency—Kirk, Roberts & Thomas, Inc.
American Optical Company 28
Agency—Sutherland-Abbott
American Steel Foundries 10
Agency—Erwin, Wasey & Company, Inc.
American Steel & Wire Division 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.
Armco Steel Corporation 44
Agency—N. W. Ayer & Son, Inc.

Baldwin-Lima-Hamilton Corporation 36, 37
Agency—Ketchum, MacLeod & Grove, Inc.
Bakelite Company, A Division of Union Carbide and Carbon Corporation 32
Agency—J. M. Mathes, Inc.
Bendix Aviation Corporation, Radio Division 19
Agency—MacManus, John & Adams, Inc.
Bethlehem Steel Company 3
Agency—Jones & Brakeley, Inc.

Canadian Cardwell Co., Ltd. 46
Agency—Van Auken, Ragland & Stevens
Cardwell Westinghouse Co. 46
Agency—Van Auken, Ragland & Stevens
Columbia-Geneva Steel Division 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.

Edison Storage Battery Division of Thomas A. Edison Incorporated 67
Agency—Ketchum, MacLeod & Grove, Inc.
Electro-Motive Division, General Motors Corporation ..... Front Cover
Agency—Kudner Agency, Inc.
Ex-Cell-O Corporation 38
Agency—Holden, Clifford, Flint, Inc.

Fairbanks, Morse & Co. 20, 21
Agency—The Buchen Company
Fairmont Railway Motors, Inc. 39
Agency—MacManus, John & Adams, Inc.

General Electric Company 33
Agency—G. M. Basford Company
General Railway Signal Company ..... Back Cover
Great Lakes Steel Corporation 41
Agency—Campbell-Ewald Co., Inc.

Hertz Driv-Ur-Self System 9
Agency—Campbell-Ewald Company, Inc.
Hunt Company, Robert W. 79
Hyman-Michaels Company 78

Industrial Brownhoist Corporation 23
Agency—Price, Hedrick & Tanner, Inc.
Iron & Steel Products, Inc. 79

Johns-Manville 42
Agency—J. Walter Thompson Company

Koppers Company, Inc. 69
Agency—Batten, Barton, Durstine & Osborn, Inc.

Lewis Bolt & Nut Company 38
Agency—Ruthrauff & Ryan, Inc.
Luria Steel and Trading Corp. 78

Minneapolis-Honeywell 34, 35
Agency—Foote, Cone & Belding
Mississippi Valley Equipment Co. 78
Mortell Co., J. W. 76
Agency—Arthur C. Barnett Advertising

National Steel Corporation 41
Agency—Campbell-Ewald Co., Inc.
National Tube Division 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.

Ohio Locomotive Crane Co., The 78
Agency—Coleman Todd & Assoc.
Okonite Co., The 38
Agency—Doyle, Kitchen & McCormick, Inc.
Orton Crane & Shovel Co. 75
Agency—W. S. Kirkland Advertising
Oxweld Railroad Service Company, Division of Union Carbide and Carbon Corporation 4
Agency—J. M. Mathes, Inc.

Pressed Steel Car Company, Inc. 22
Agency—Albert Frank-Guenther Law, Inc.
Purdy Company, The 78
Pyrene Manufacturing Company 74
Agency—Gray & Rogers

Railway Educational Bureau Inc. 79
Remington Rand Inc. 73
Agency—Leeford Advertising Agency, Inc.
Ryerson & Son Inc., Joseph T. 80

Scullin Steel Co. 81
Agency—Batz-Hodgson-Neuwoehner Advertising Agency
Simmons-Boardman Publishing Corporation 45
Sinclair Refining Company 26, 27
Agency—Morey, Humm & Johnstone, Inc.
SKF Industries, Inc. 72
Agency—O. S. Tyson & Company, Inc.
Standard Car Truck Company 65
Agency—Van Auken, Ragland & Stevens

Tennessee Coal & Iron Division 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.
Texas Company, The 2
Agency—Erwin, Wasey & Co., Inc.

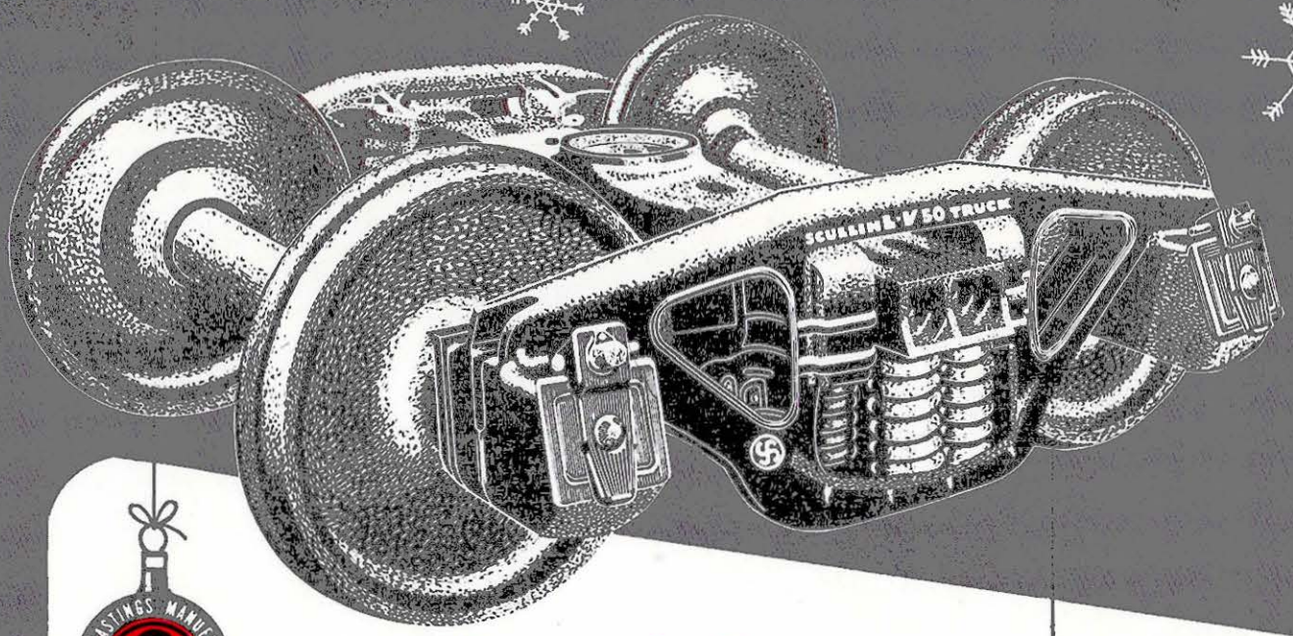
Union Switch & Signal 6
Agency—Ketchum, MacLeod & Grove, Inc.
United States Steel Export Company 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.
United States Steel Supply Division 24, 25
Agency—Batten, Barton, Durstine & Osborn, Inc.

Western Railroad Supply Co. 29
Agency—L. H. Gross & Associates
Westinghouse Electric Corporation 36, 37
Agency—Fuller & Smith & Ross, Inc.

STEEL *in stock at* **RYERSON**

Every kind of steel is in stock for quick shipment though many sizes are often missing due to the heavy demand. Joseph T. Ryerson & Son, Inc., Plants: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City, Pittsburgh, Los Angeles, San Francisco, Seattle, Spokane

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—sheared & U. M., Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types and coatings
TUBING—boiler & mechanical, seamless & welded
STAINLESS—Allegheny plates, sheets, bars, tubes



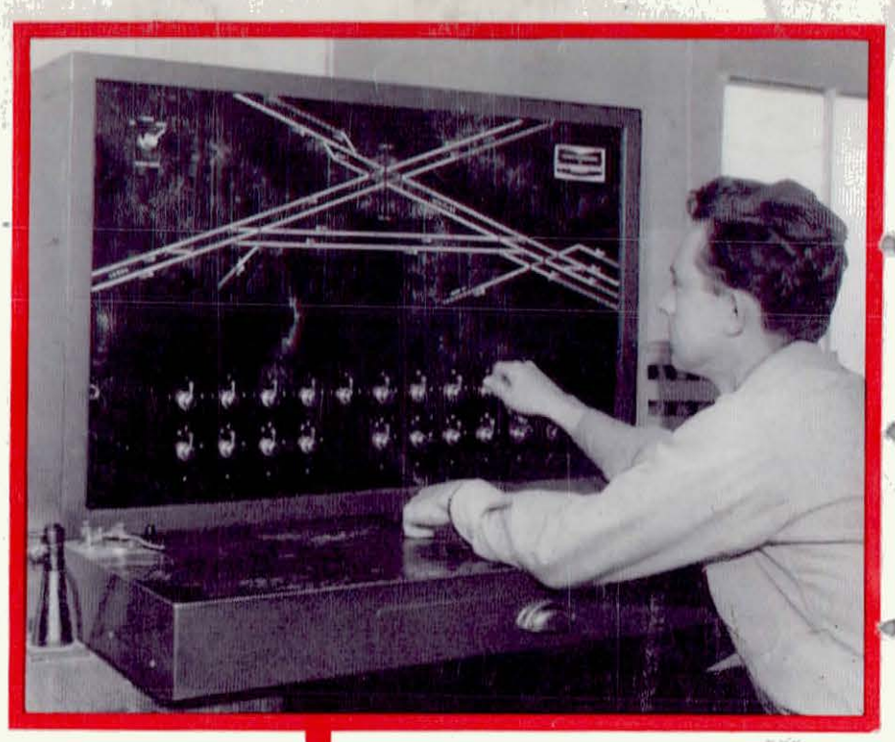
STEEL CASTINGS MANUFACTURED

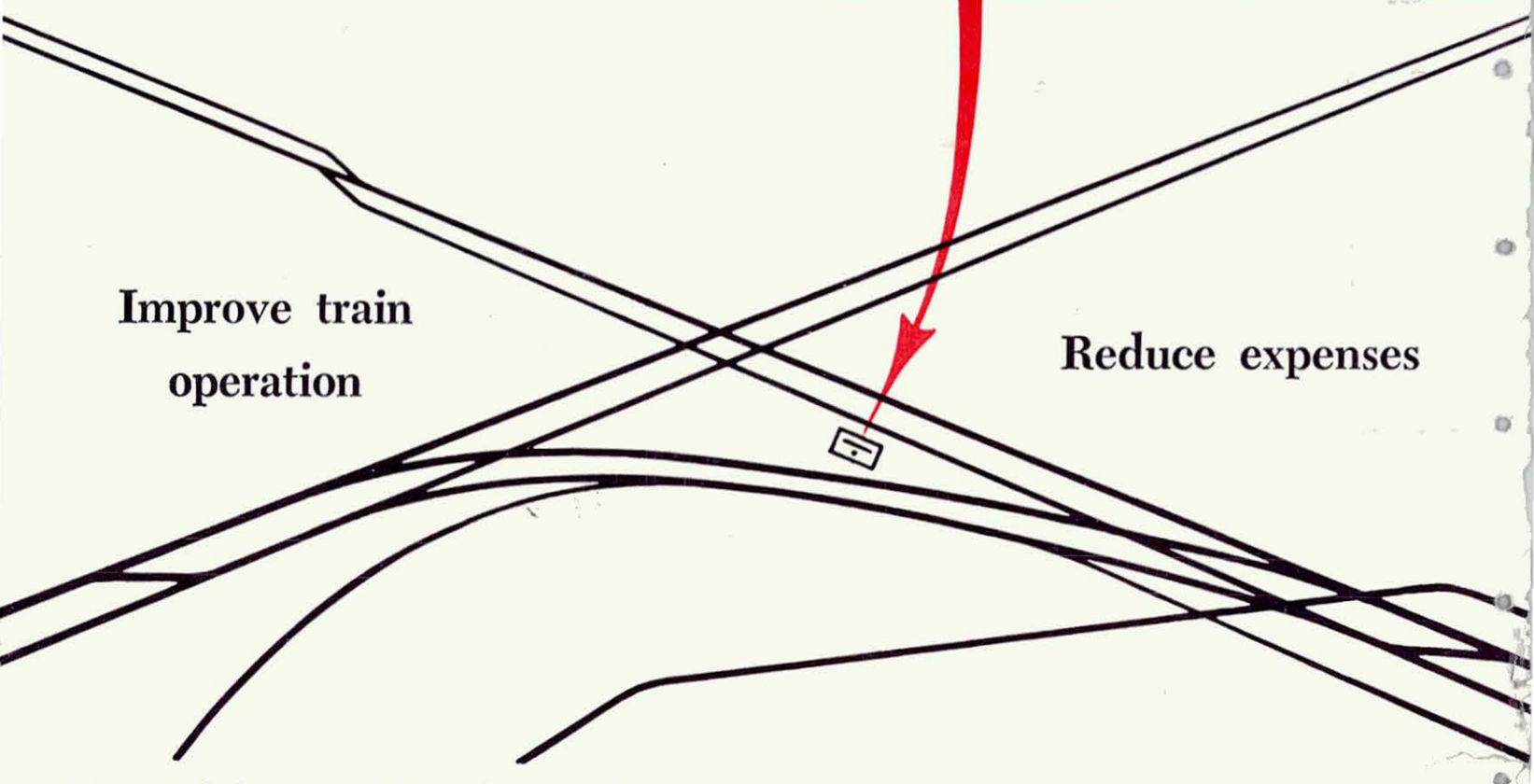
Season's Greetings

SCULLIN STEEL CO.

SAINT LOUIS 10 MISSOURI

Modernize with G-R-S ALL-RELAY INTERLOCKING





A 1914 interlocker on a southern railway, worn beyond possibility of economical repair, was recently replaced with a G-R-S all-relay interlocking.

Now traffic at this important junction, 60 to 65 trains daily in addition to switching moves, is handled with lower operating costs.

You can benefit by modernizing with G-R-S all-relay interlocking systems. Consult your G-R-S district office for data and estimates.

GENERAL RAILWAY SIGNAL COMPANY

230 Park Av. NEW YORK 17 | 122 S. Mich. Av. CHICAGO 3 | Main Office ROCHESTER 2, N. Y. | 611 Olive St. ST. LOUIS 1